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100/300 AREA UNIT MANAGERS MEETING
APPROVAL OF MEETING MINUTES

August 13, 2015

APPROVAL: _____ Date 10/8/15
Mark French, DOE/RL (A6-38)
River Corridor Project Manager

APPROVAL: _____ Date 10/8/15
Mike Cline, DOE/RL (A5-11)
Groundwater Project Manager

APPROVAL: _____ Date 10/8/15
Nina Menard, Ecology (H0-57)
Environmental Restoration Project
Manager

APPROVAL: _____ Date 10/8/15
Laura Buelow, Rod Lobos, or Christopher
Guzzetti, EPA (B1-46)
100 Area Project Manager

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100 & 300 AREA UNIT MANAGER MEETING MINUTES

Groundwater and Source Operable Units; Facility Deactivation, Decontamination, Decommission, and Demolition (D4); Interim Safe Storage (ISS); Field Remediation (FR); Mission Completion; and 100-K Sludge Treatment Project and 100-K Facility Demolition and Soil Remediation Projects

August 13, 2015

ADMINISTRATIVE

- Next Unit Manager Meeting (UMM) – The next meeting will be held September 10, 2015, at the Washington Closure Hanford (WCH) Office Building, 2620 Fermi Avenue, Room C209.
- Attendees/Delegations – Attachment A is the list of attendees. Representatives from each agency were present to conduct the business of the UMM. Attachment B is a delegation letter.
- Approval of Minutes – The July 9, 2015, meeting minutes were approved by the U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and U.S. Department of Energy, Richland Operations Office (RL).
- Action Item Status – The status of action items was reviewed and updates were provided (see Attachment C).
- Agenda – Attachment D is the Regular Session meeting agenda.

EXECUTIVE SESSION (Tri-Parties Only)

An Executive Session was not held by RL, EPA, and Ecology prior to the August 13, 2015, UMM.

PRESENTATION

Art Lee gave a demonstration of the 2014 Annual Hanford Groundwater Report Interactive Application.

100-K AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 2 provides a status of the 100-K Sludge Treatment Project and the 100-K Facility Demolition and Soil Remediation projects. No issues were identified and no agreements or action items were documented.

100-B/C AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 3 provides status and information for Washington Closure Hanford (WCH) Closure Operations activities at 100-B/C, 100-D, 100-H, 100-N, 100-IU-2/6, and 618-10. Attachment 4 provides the Field Remediation schedule for 100-B, 100-D, 100-H, 100-N, and 100-IU-2/6. No issues were identified and no agreements or action items were documented.

100-N AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 3 provides status and information for WCH Closure Operations activities at 100-B/C, 100-D, 100-H, 100-N, 100-IU-2/6, and 618-10. Attachment 4 provides the Field Remediation schedule for 100-B, 100-D, 100-H, 100-N, and 100-IU-2/6. No issues were identified and no agreements or action items were documented.

100-D & 100-H AREAS (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 3 provides status and information for WCH Closure Operations activities at 100-B/C, 100-D, 100-H, 100-N, 100-IU-2/6, and 618-10 Attachment 4 provides the Field Remediation schedule for 100-B, 100-D, 100-H, 100-N, and 100-IU-2/6. No issues were identified and no action items were documented.

Agreement 1: Attachment 5 provides an Ecology, EPA, and DOE approved Tri-Party Agreement change notice TPA-CN-657 to modify the *Remedial Design Report and Remedial Action Work Plan for the 100-HR-3 and 100-KR-4 Groundwater Operable Units' Interim Action*, DOE/RL-96-84, Revision 0, to allow for single use, high capacity, ResinTech SIR-700 ion exchange resin as an approved alternate resin for use within the DX and HX groundwater pump-and-treat systems.

Agreement 2: Attachment 6 provides an Ecology and DOE approved Tri-Party Agreement change notice TPA-CN-674 to modify the *100-HR-3 and 100-KR-4 Remedial Design Report and Remedial Action Work Plan for the Expansion of the 100-KR-4 Pump and Treat System*, DOE/RL-2006-75, Reissue, Revision 1, to provide clarification to allow the use of SIR-700 at KW and KX pump-and-treat systems.

Agreement 3: Attachment 7 provides EPA's and Ecology's concurrences of a non-contiguous onsite approval request to send sample waste (PPE, plastic scoops, etc.) from the 100-H-36 spillway/flume to an ERDF can staged at 100-D.

Agreement 4: Attachment 8 provides EPA's and Ecology's concurrences of a non-contiguous onsite approval request to send waste to the ERDF can staged at 100-D from nuisance spills of non-regulated fluids like engine oil or hydraulic fluid during the remaining backfill campaign at 100-H scheduled to be complete in October (and potentially during revegetation this winter).

100-F & 100-IU-2/100-IU-6 AREAS (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 3 provides status and information for WCH Closure Operations activities at 100-B/C, 100-D, 100-H, 100-N, 100-IU-2/6, and 618-10. Attachment 4 provides the Field Remediation schedule for 100-B, 100-D, 100-H, 100-N, and 100-IU-2/6. No issues were identified and no agreements or action items were documented.

300 AREA – 618-10/11 (GROUNDWATER, SOILS)

Attachment 1 provides status and information for groundwater. Attachment 3 provides status and information for WCH Closure Operations activities at 100-B/C, 100-D, 100-H, 100-N, 100-IU-2/6, and 618-10. No issues were identified and no agreements or action items were documented.

300 AREA - GENERAL (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 9 provides status of the 300 Area Closure Project activities. No issues were identified and no agreements or action items were documented.

ORCHARD LANDS

Attachment 10 provides a status on the 100-OL-1 Orchard Lands Remedial Investigation.

OTHER TOPICS

None.

Attachment A

100/300 AREA UNIT MANAGER MEETING
ATTENDANCE
August 13, 2015

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Attachment B

RL-F-1325.6 (02/98)

United States Government **Department of Energy**

Richland Operations Office

memorandum

DATE: JUL 0 9 2015

REPLY TO ATTN OF: AMRP:MSF/15-AMRP-0260

SUBJECT: DELEGATION OF TRI-PARTY AGREEMENT (TPA) PROJECT MANAGER RESPONSIBILITIES

TO: John P. Neath, RCD

This memo is to delegate certain TPA Project Manager authorities to you and notify affected parties of that delegation. In the event of my absence you are delegated the following project manager authorities for operable units where I am listed as the DOE Project Manager in the TPA Operable Unit Project Managers List maintained in the Administrative Record. The following specific authorities are delegated, pursuant to Section 4.1 of the Tri-Party Agreement:

- Conduct monthly project manager meetings and approve project manager meeting minutes (Section 4.1)
- Determination of additional documentation to be included within the Administrative Record, as is collectively agreed upon during monthly project manager meetings (Action Plan Section 9.4)

This delegation of authority will remain in effect until superseded by a subsequent delegation. If you have any questions, please contact me at (509) 373-9863.

Mark S. French, Director
River Corridor Division

cc: J. V. Borghese, CHPRC
L. C. Buelow, EPA
C. E. Cameron, EPA
D. A. Faulk, EPA
D. Goswami, Ecology
J. A. Hedges, Ecology
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C. P. Noonan, MSA
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S. N. Schleif, Ecology
B. W. Simes, EPA
D. G. Singleton, Ecology
M. J. Turner, MSA
C. L. Whalen, Ecology
Administrative Record
Environmental Portal

Attachment C

100/300 Area UMM
Action List
August 13, 2015

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status

Attachment D

100/300 Area Unit Manager Meeting
August 13, 2015
Washington Closure Hanford Building
2620 Fermi Avenue, Richland, WA 99354
Room C209; 2:00 p.m.

Administrative:

- Approval and signing of previous meeting minutes (July 9, 2015)
- Update to Action Items List
- Next UMM (9/10/2015, Room C209)

Open Session: Project Area Updates - Groundwater, Field Remediation, D4/ISS:

- Demonstration of 2014 Annual Groundwater Report Interactive Application (Craig Arola)
- 100-K Area (Jim Hanson, Roger Quintero)
- 100-B/C Area (Greg Sinton, Tom Post)
- 100-N Area (Greg Sinton, Rudy Guercia)
- 100-D & 100-H Areas (Jim Hanson, Tom Post)
- 100-F & 100-IU-2/6 Areas (Greg Sinton, Tom Post, Jamie Zeisloft)
- 300 Area - 618-10/11 exclusively (Jamie Zeisloft)
- 300 Area (John Sands/Rudy Guercia)
- Orchard Lands (John Sands)

Special Topics/Other

Adjourn

Attachment 1

Unit Managers Meeting- August 2015- *July 2015 information*

Summary Hanford Sampling Program

Hanford's overall Site groundwater monitoring program managed by CHPRC (River Corridor and Central Plateau) coordinates collection of groundwater samples from wells and aquifer tubes, as well as surface water samples from springs. Sample trips are scheduled by target month and prioritized based on project needs. Target sample dates (months) are chosen to minimize the number of sample trips by temporally aligning requests from multiple activities for a single location into a single trip where practical.

Overall Progress Summary

For Fiscal Year 2015 Hanford's overall Site groundwater monitoring program has 3,027 sample trips scheduled for collection. We have successfully completed 2,459 of 2,526 sample trips scheduled for October 2014 through July 2015.

Sample Trip Status

Month Scheduled

Through July 2015 (FY15, month ten) the program successfully completed 186 of the 212 groundwater sampling trips scheduled for July 2015 and 15 trips scheduled for August which were collected in July ahead of schedule. This brings the total number of FY 2015 trips to be collected to 2,474.

The specific wells, aquifer tubes, and springs sampled in the river corridor areas during July 2015 are listed in Table 1.

Month Collected

During July 2015, 225 sample trips were successfully collected. This includes the 34 trips scheduled for October 2014 through June 2015, 176 trips scheduled for July, and 15 trips scheduled for August. This brings the total number of trips sampled during October 2014 through July 2015 to 2,456. Additionally 18 trips scheduled for October 2014 were sampled in September which brings the total number of FY 2015 trips to 2,474.

The specific wells, aquifer tubes, and springs sampled in the river corridor areas during July 2015 are listed in Table 1.

Sample Trips Awaiting

Of the Fiscal Year 2015 sample trips scheduled for July 2015 and prior, there are 63 that are awaiting collection. Of these, 4 P&T wells are not running, 15 require maintenance, 12 have access restrictions, 12 are not on the Well Access List, 6 are being evaluated for cancelation or rescheduling, and 14 are awaiting collection at the month end.

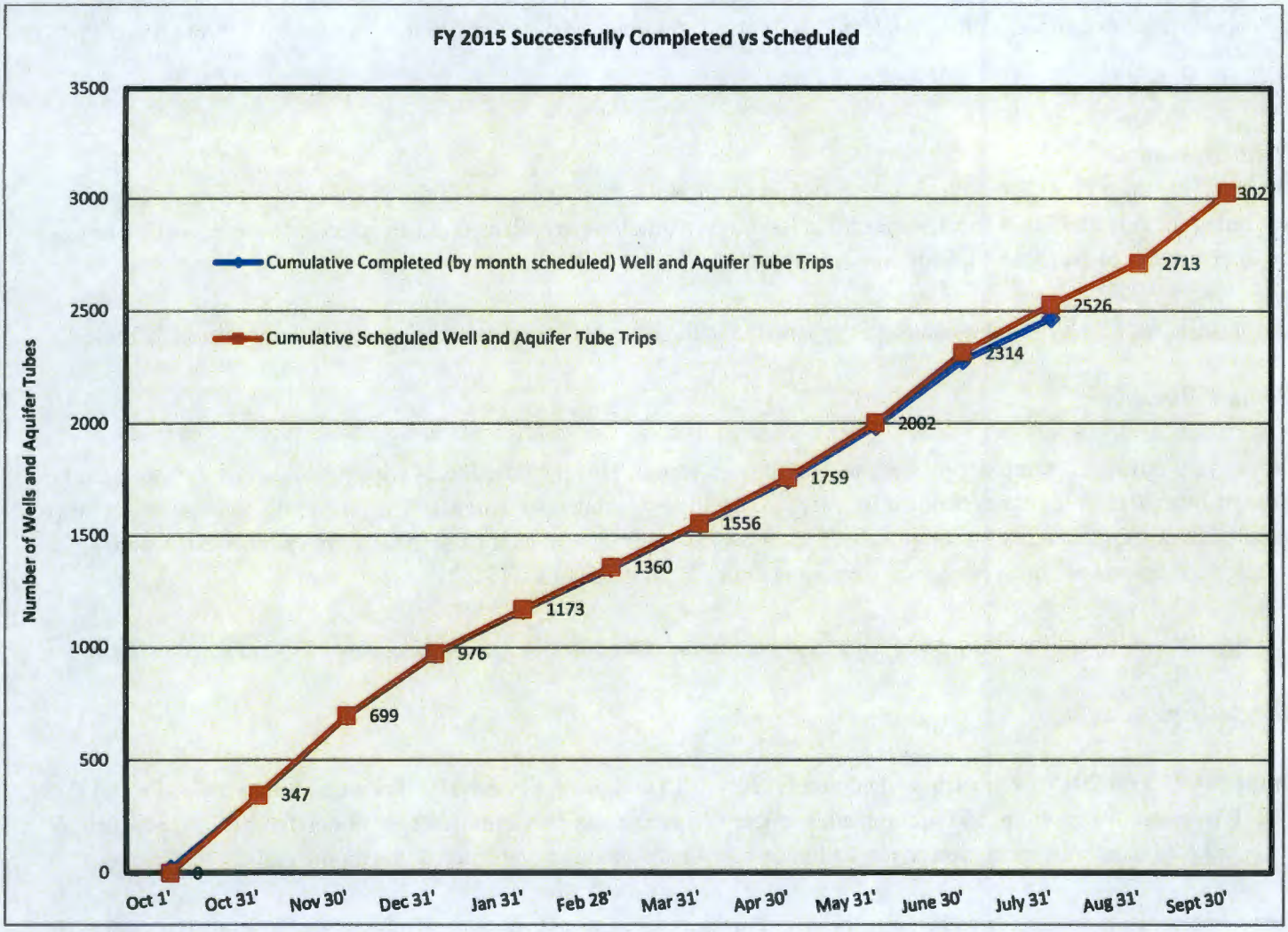
Table 2 presents the sample trips for only the river corridor that were not successfully completed in July. The sample trips are grouped by fiscal month scheduled and groundwater interest area. This table clearly shows that the number of awaiting well trips decreases with time from the schedule date. Reasons for sample trips to be awaiting include but are not limited to issues such as well maintenance, weather conditions, access restrictions, and resource limitations.

Upcoming Sample Trips

Sample trips for the river corridor only, scheduled for collection in August 2015 (and not collected before the target sample month) are listed in Table 3.

Data Access

The sampling results are available in HEIS and can be accessed from the Environmental Dashboard Application which can be accessed from the HLAN at https://ehs.chprc.rl.gov/eda/ or from the internet at https://ehs.hanford.gov/eda/.



Special Feature(s)

Aquifer Tube Sampling (Bill Faught/Mary Hartman)

Since 2000, aquifer tube sampling requirements have been documented in the *Sampling and Analysis Plan for Aquifer Sampling Tubes* (DOE/RL-2000-59). The current revision (Rev. 1) was released in 2009 and has been modified by a series of TPA change notices. Some aquifer tubes are also sampled for other requirements in OU-specific SAPs, but the majority of requirements are in DOE/RL-2000-59.

The need for aquifer tube data is being assessed for each groundwater operable unit during groundwater DQO workshops, as new OU SAPs are prepared. As these SAPs are revised, their requirements for aquifer tube monitoring will supersede those in DOE/RL-2000-59. This has already taken effect for 100-FR-3 (aquifer tubes are included in DOE/RL-2003-49, Rev. 2, which was implemented in fall 2014). Similar changes are in progress for 300-FF-5 (to be implemented in fall 2015) and are planned for the other OUs (to be implemented later in FY 2016).

CHPRC is preparing a TPA change notice to DOE/RL-2000-59 specifying that aquifer tube sampling requirements for 100-FR-3 and 300-FF-5 are contained in the OU SAPs, and there are anticipated similar changes for the other OUs as the new SAPs are implemented.

Operable Unit Specifics

100-KR-4 Groundwater Operable Unit (Mike Drewett/Chuck Miller/Jason Hulstrom)

- CERCLA Process Implementation:
  - RI/FS, Proposed Plan and Additional Characterization: The RI/FS and PP documents are on hold pending 100-K East Reactor waste site characterization (wells 116-KE-3 and UPR-100-K-1) and modeling.
  - Construction of well 199-K-221 is complete at the 116-KE-3 Fuel Storage Basin Crib and Reverse Well. This boring is the first of two implemented at contaminant release areas in the vicinity of the former 105-KE Fuel Storage Basin. Vadose zone sample collection is proceeding according to the sampling instruction. The location of this well is shown in Figure K-1.
  - Drilling continues at well 199-K-222, located at the UPR-100-K-1 waste site. The location of this borehole is shown in Figure K-1.
  - Monitoring Plan: The Draft A, O&M Plan, RD/RAWP, and Groundwater Monitoring Plan are still on hold pending resolution of 100-HR-3 comments and pH value engineering evaluation.
- Remedial Actions & System Modifications:
  - The volume of groundwater treated and mass of Cr(VI) removed for each 100-K P&T system (**KX, KR-4,** and **KW**) during July 2015 are:

- Treated 64.1 million gallons (64.1 in June).
- Removal 3.76 kg of hexavalent chromium (3.97 in June)

- The current influent and effluent Cr(VI) concentrations (measure once weekly) for the three K systems (as measured on July 28, 2015) are:

  - 100-KR4 – Influent = 5 µg/L; Effluent = less than detection
  - 100-KW – Influent = 20 µg/L; Effluent = less than detection
  - 100-KX – Influent = 19 µg/L; Effluent = 1 µg/L

- For the month of July, 2015, all three pump and treat systems at 100-KR-4 OU operated at 100% (fully on-line) and 30-day average pumping rates of 338 gpm, 329 gpm, and 816 gpm for the KR-4, KW, and KX systems, respectively. A summary of the number of extraction and injection wells in the three systems is shown in Table K-1.

Wells	KR4		KX		KW		Total	
	2014	2015	2014	2015	2014	2015	2015	Current
Number of extraction wells	12	12	18	19	11	11	42	42
Number of injection wells	5	5	9	9	4	4	18	18

Table K-1. Summary of the number of extraction and injection wells in the three systems

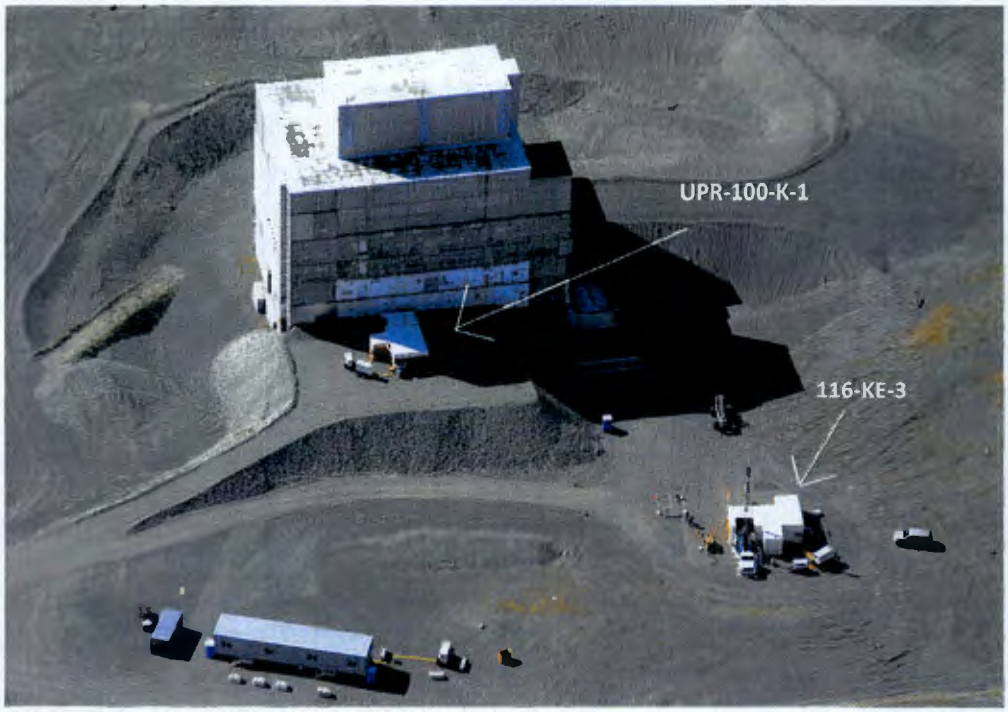


Figure K-1. Location of Drilling at 116-KE-3 and UPR-100-K-1 at KE Reactor

- All KR-4 system extraction wells and injection wells are currently in service. The hexavalent chromium concentration in extracted water at the KR-4 system continues to be below site cleanup requirements. The system remains in service to provide hydraulic capture of groundwater inland of the river.

- At the KW system, wells 199-K-132, 199-K-139, and 199-K-166 are currently off-line and in standby to allow increased pumping rates along the central axis of the hexavalent chromium plume. Extraction well 199-K-205, located at the former 183-KW Head House vicinity, continues operating at an extraction rate of 120 gpm and provides the highest concentration of hexavalent chromium. Well 199-K-173 was out of service briefly to replace a submersible pump. All injection wells are in service.

- All KX system extraction wells are in service.

- Figures K-2 through K-4 present the groundwater treatment rate and hexavalent chromium removal information. As indicated in the curves below, Cr(VI) mass removal at KR-4, KW, and KX have generally decreased in recent months due to continued optimization of remedial performance (e.g., increasing the overall system pumping rates, while extracted groundwater concentrations decrease).

- Hexavalent chromium concentration at 199-K-205 has declined to 36 µg/L, although this still represents the highest concentration at 100-KW. This single well continues to account for most of the Cr(VI) entering the KW system due to pumping rate and persistent elevated chromium concentration. Pumping is being currently focused on wells along the axis of the Cr(VI) plume where peripheral wells are exhibiting reduced Cr(VI) concentrations.

Figure K-2. Monthly Cr(VI) removed and groundwater volume treated by 100-KR4 pump-and-treat, September 2011 through July 2015.

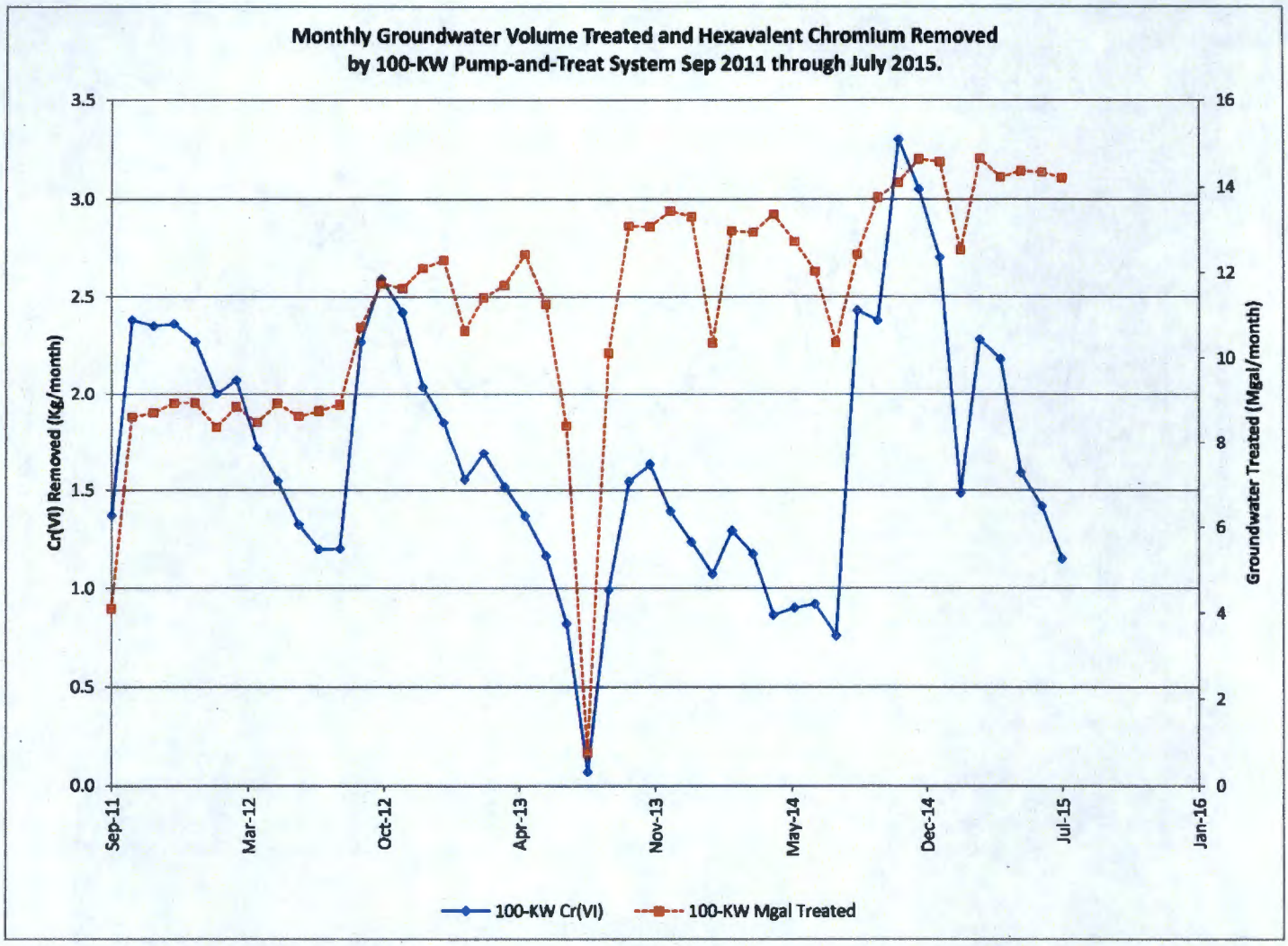


Figure K-3. Monthly Cr(VI) removed and groundwater volume treated by 100-KW pump-and-treat, September 2011 through July 2015.

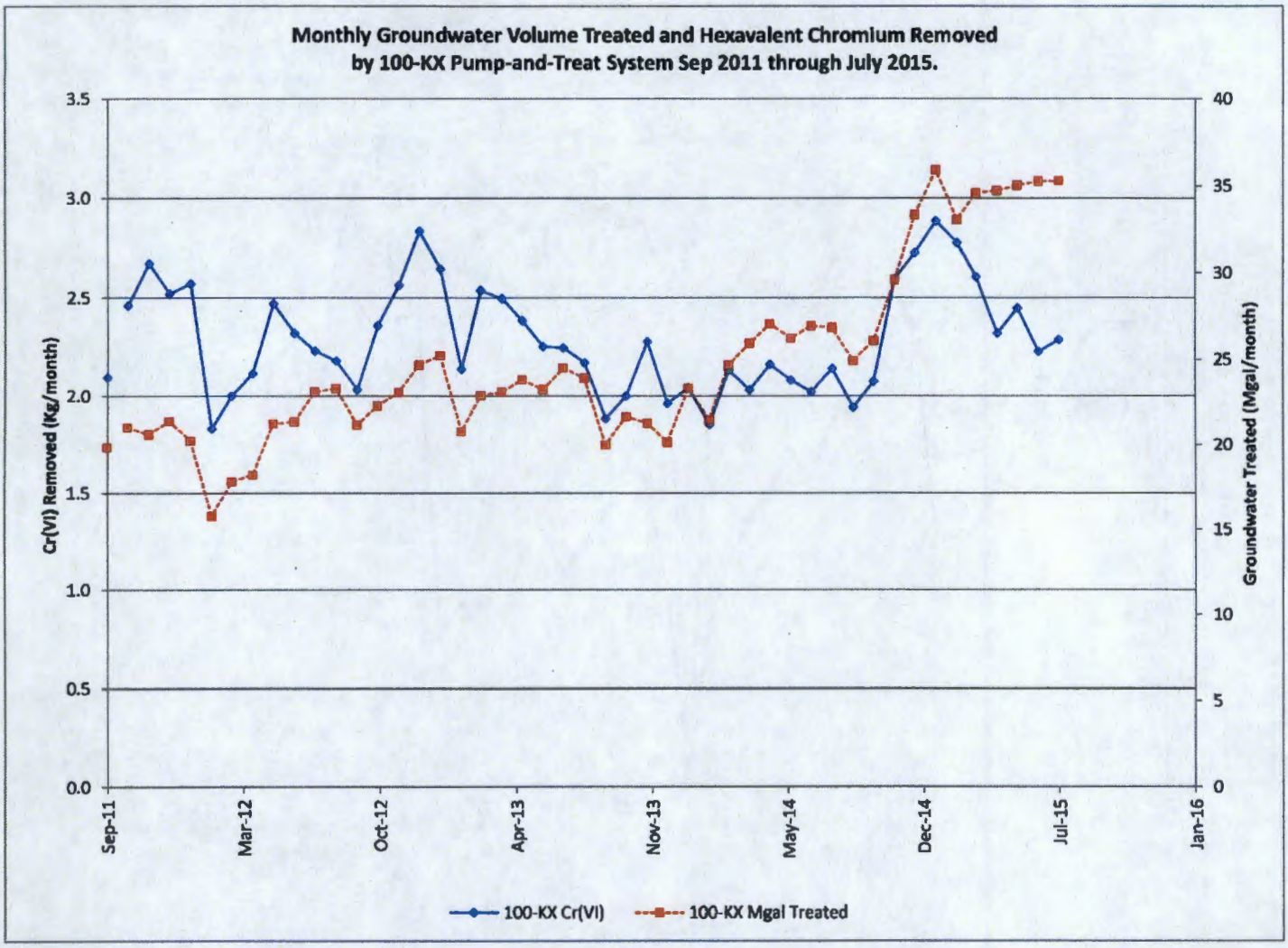


Figure K-4. Monthly Cr(VI) removed and groundwater volume treated by 100-KX pump-and-treat, September 2011 through July 2015.

100-BC-5 Groundwater Operable Unit – Robert Evans/Mary Hartman

Milestone M-015-79: Due 12/15/2016 for the CERCLA RI/FS Report and Proposed Plan for the 100-BC-1, 100- BC-2 and 100-BC-5 Operable Units

- CERCLA Process Implementation:
  - Continued groundwater monitoring and hyporheic zone sampling.
  - The draft groundwater sampling and analysis plan that will cover the 3 to 5 year period between RI completion and groundwater remedy implementation has completed DOE review. It is scheduled to be completed by fall 2015.
- Monitoring & Reporting:
  - The HSPs were sampled as planned in July. Figure BC-1 shows river stage. June hexavalent chromium results were loaded into HEIS and were consistent with previous results. Because river stage was lower than normal in June 2015, we did not observe lower concentrations of hexavalent chromium as we did in June 2014.
  - Fourteen monitoring wells were sampled in July. All of the June and July wells were sampled successfully.
  - Hexavalent chromium data from most of the June and July samples have been loaded into HEIS. In southern 100-BC near the former 100-C-7 and 100-C-7:1 sources (Figure BC-2), concentrations declined in new (shallow) wells 199-B5-10 and 199-B5-12. Farther east there is a consistent, gradual decline in 199-B9-3. In central 100-BC (Figure BC-3) concentrations continued to decline. This is consistent with our previous interpretation that the 100-C-7:1 peak has migrated past these wells. In northern 100-BC (Figure BC-4) concentrations declined slightly. It is premature to conclude whether this represents passing of the 100-C-7 peak. The rate of groundwater flow is lower in this region because all or most of the unconfined aquifer is within Ringold unit E, not in the Hanford formation as is the case farther south. East of 100-BC (Figure BC-5) concentrations declined slightly. Levels remain above 10 µg/L but were below 20 µg/L. Thus the apparent eastward spread of the plume seems to have abated.

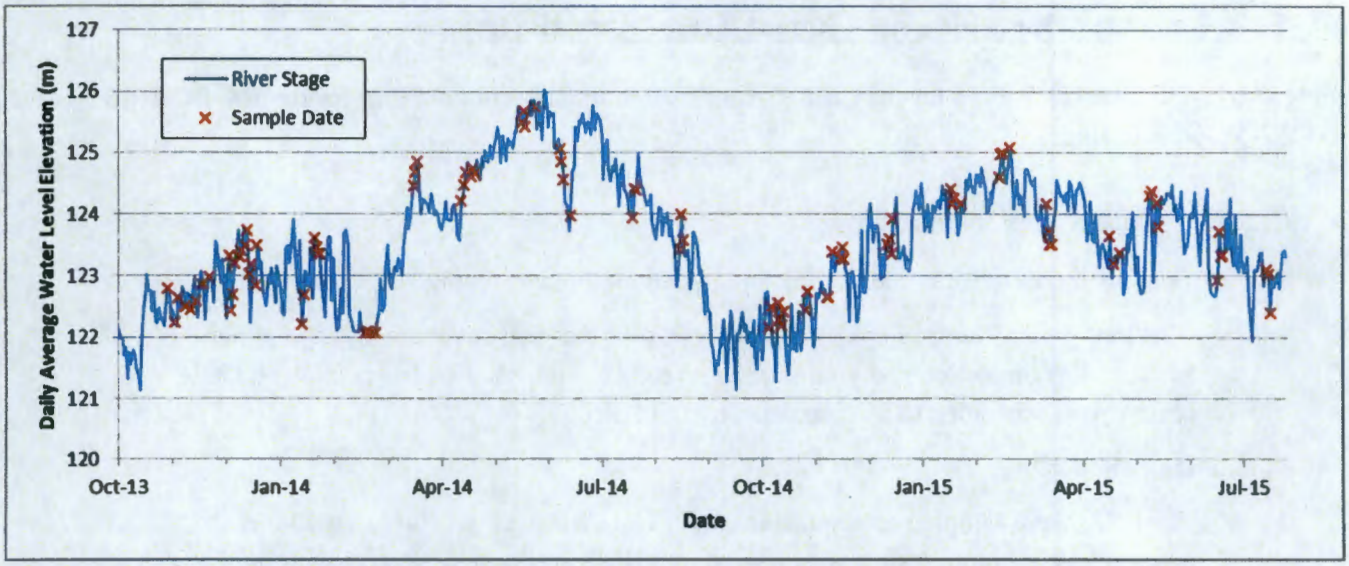


Figure BC-1. River Stage and Sampling Dates for 100-BC Hyporheic Sampling Points

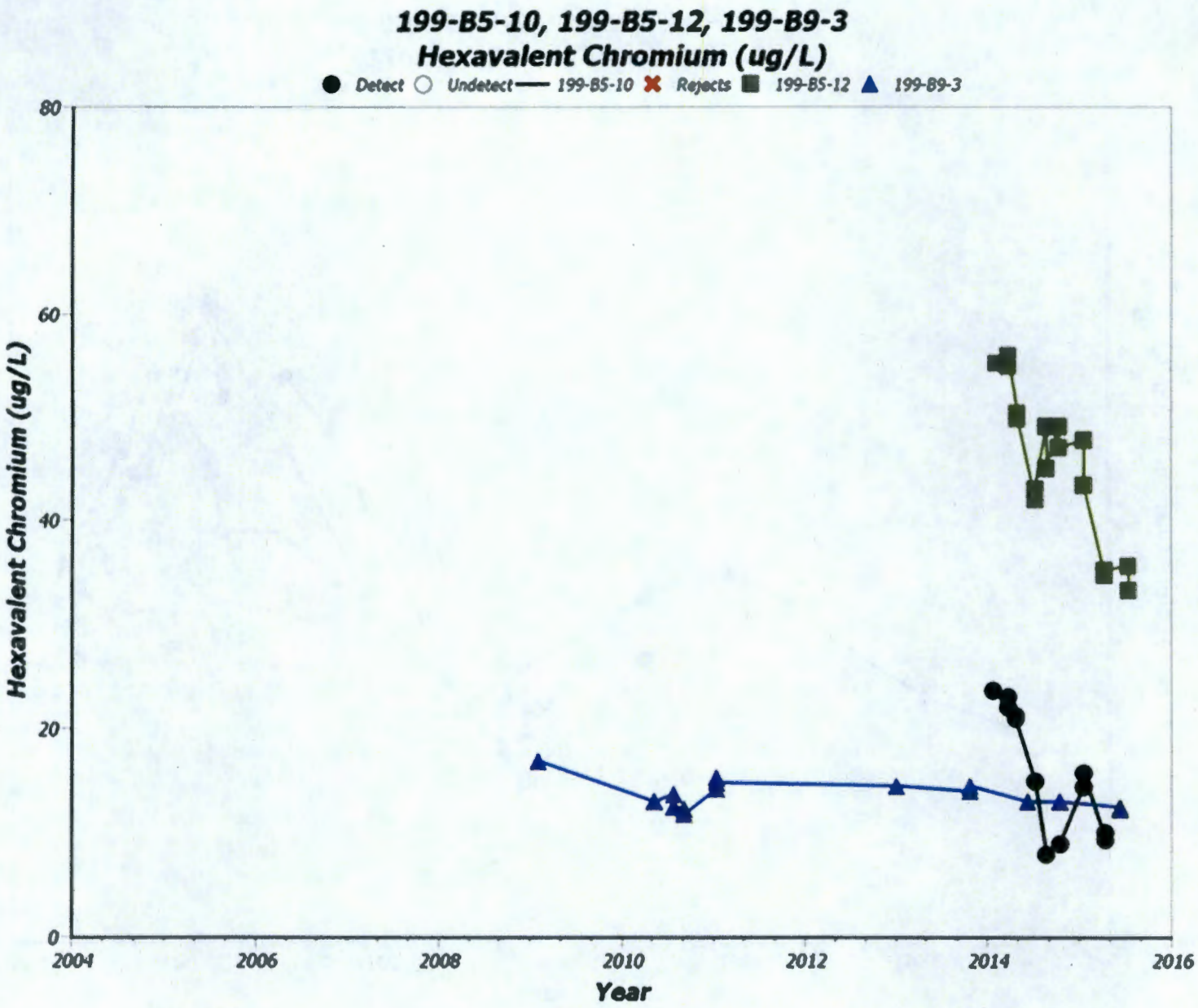


Figure BC-2. Hexavalent Chromium in Southern 100-BC Area.

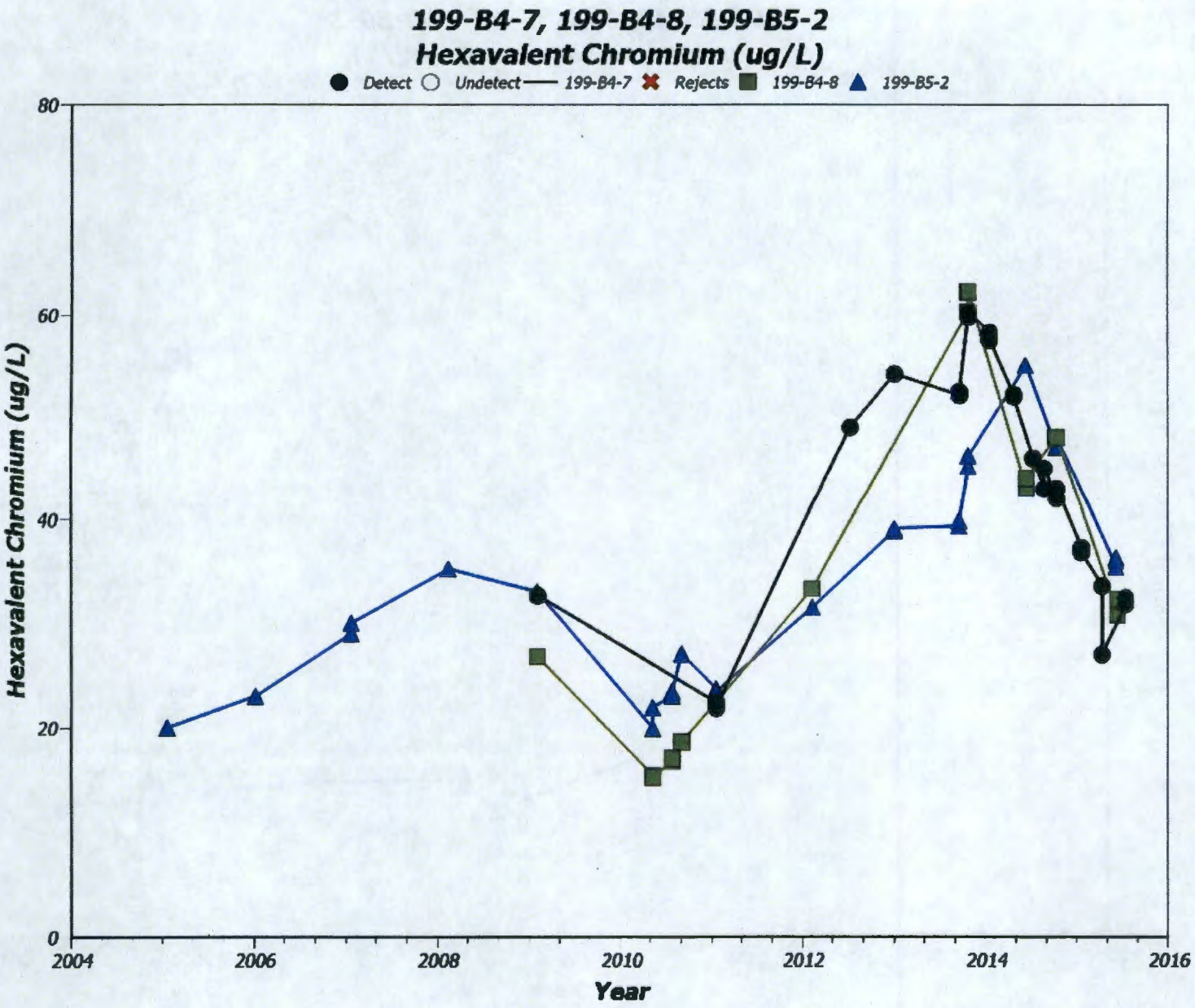


Figure BC-3. Hexavalent Chromium in Central 100-BC

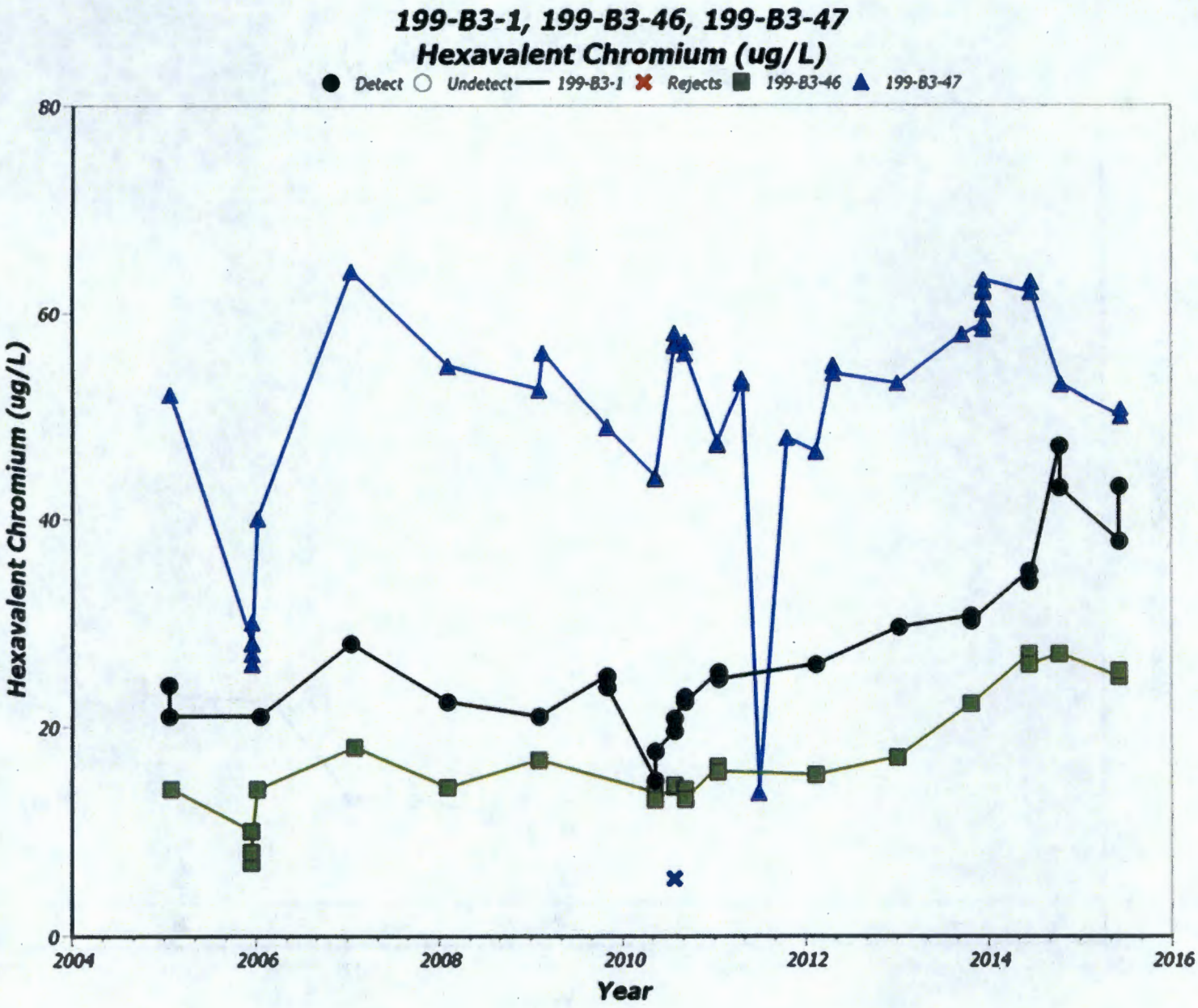


Figure BC-4. Hexavalent Chromium in Northern 100-BC

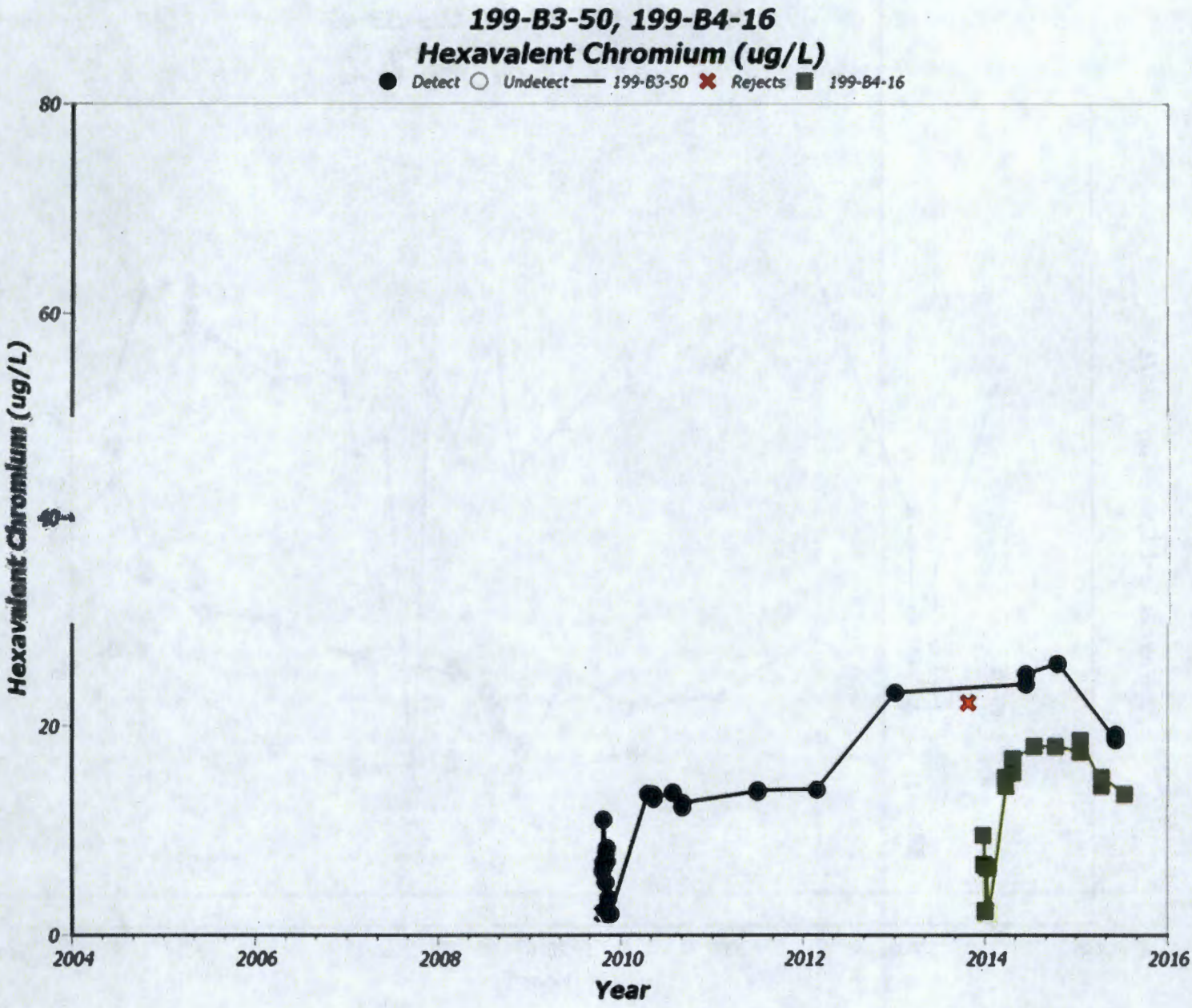


Figure BC-5. Hexavalent Chromium East of 100-BC

100-NR-2 Groundwater Operable Unit – Bill Faught/Virginia Rohay/Art Lee

- CERCLA Process Implementation:
  - The Draft A, RI/FS Report (DOE/RL-2012-15) and Proposed Plan (DOE/RL-2012-68) were transmitted to Ecology on June 24, 2013, completing TPA milestone M-015-75.
  - Ecology initial comments on the Draft A, RI/FS Report were received on October 2, 2013. We are preparing responses and redline changes to these comments. Chapters 1 to 8 are in progress and we have completed discussion on informal comments on the "PRB and Hot Spots" and "P&T" position papers. "Surface Barriers" and "Phyto-Remediation" remain.
  - Revised Chapter 6 red-lines and the associated RCR form (incorporating the new waste sites) were provided to Ecology for review on February 9, 2015. Comments on this revised text arrived from Ecology on May 21, 2015. Responses continue to be shared.
  - Revised Chapter 7 red-lines and the associated RCR form were completed and sent to Ecology February 26, 2015. On June 2, 2015, Ecology closed 2 of the 3 remaining comments on this chapter. We anticipate resolving the single remaining comment in August.
  - The numerical modeling performed for Draft A is being revisited. Follow-up FS discussions and workshops will begin once the risk assessment comments are complete.
- Remedial Actions –
  - ***Bioventing***- Figure NR-1 provides a chart showing bioventing well gas sample results for monitoring wells 199-N-171 and 199-N-169. No change from last month since routine vapor samples were not collected in July because of the respirometry test. The bioventing system was shut down on June 22, 2015, in support of the summer respirometry testing event. The test duration was 6 weeks and was completed on August 3, 2015. The bioventing system was restarted on August 3, 2015, following completion of the test.

    During the respiration testing, soil gas samples were collected and analyzed for oxygen, carbon dioxide, methane, and total volatile hydrocarbons from six monitoring locations (Wells 199-N-167, 199-N-169, 199-N-171, 199-N-172, 199-N-183, and 199-N-18). The relationship between oxygen consumption and carbon dioxide production is used to estimate the rate of biodegradation. Oxygen utilization is the primary method for estimating the rate of hydrocarbon degradation in the soil.

    Figures NR-2 through NR-7 plot the oxygen concentration for the six respirometry test monitoring wells. Preliminary evaluation of the gas measurements indicate higher oxygen utilization rates at wells 199-N-169 and 199-N-171 than the other respirometry test monitoring wells, as indicated by the steeper declining trend observed in the measured oxygen concentration at wells 199-N-169 and 199- N-171 (Figures NR-3 and NR-4), compared to the other wells. However, the oxygen utilization rates (and hence the calculated biodegration rate) are less than observed from the last respirometry test conducted in the winter 2014 (Table NR-1). Oxygen measurements between 19 and 22 percent represent essentially atmospheric conditions indicating insignificant oxygen depletion as observed at monitoring wells 199-N-183 and 199-N-18 (Figures NR-6 and NR-7) which are furthest from the area of suspected residual TPH contamination in the vadose zone soils. Oxygen utilization rates are derived from the slope of the least squares fit line for the measured data.

Groundwater samples were collected in July from the bioremediation groundwater monitoring wells and aquifer tubes while the bioventing system was shut down for the respirometry test.

- Monitoring wells:
  - 199-N-167
  - 199-N-172
  - 199-N-169
  - 199-N-171
  - 199-N-3
  - 199-N-183
  - 199-N-96A
  - 199-N-173
  - 199-N-19
  - 199-N-56
- Aquifer Tubes:
  - C6132

Two aquifer tubes, C6135 and 116mArray-0A, could not be sampled and need to be repaired. The groundwater sample analyses includes Extractable Petroleum Hydrocarbon (EPH) which will help in partitioning between soil and groundwater TPH data for the various carbon fractions.

An oil/water interface probe was lowered in each of the groundwater monitoring wells to determine presence of any free product layer. No discernable product layer was detected by the probe in any of the wells and the probe indicated only conductive liquid (water).

Table NR-1. Comparison of Biodegradation Rate from Respirometry Testing

Monitoring Location	Biodegration Rate (mg/kg-day)		
	Jul-15	Dec-14	Jul-14
199-N-167	-0.06	-0.05	-0.06
199-N-169	-0.11	-0.23	-0.09
199-N-171	-0.13	-0.23	-0.09
199-N-172	-0.03	-0.05	-0.02
199-N-183	N/A	N/A	N/A
199-N-18	N/A	N/A	N/A

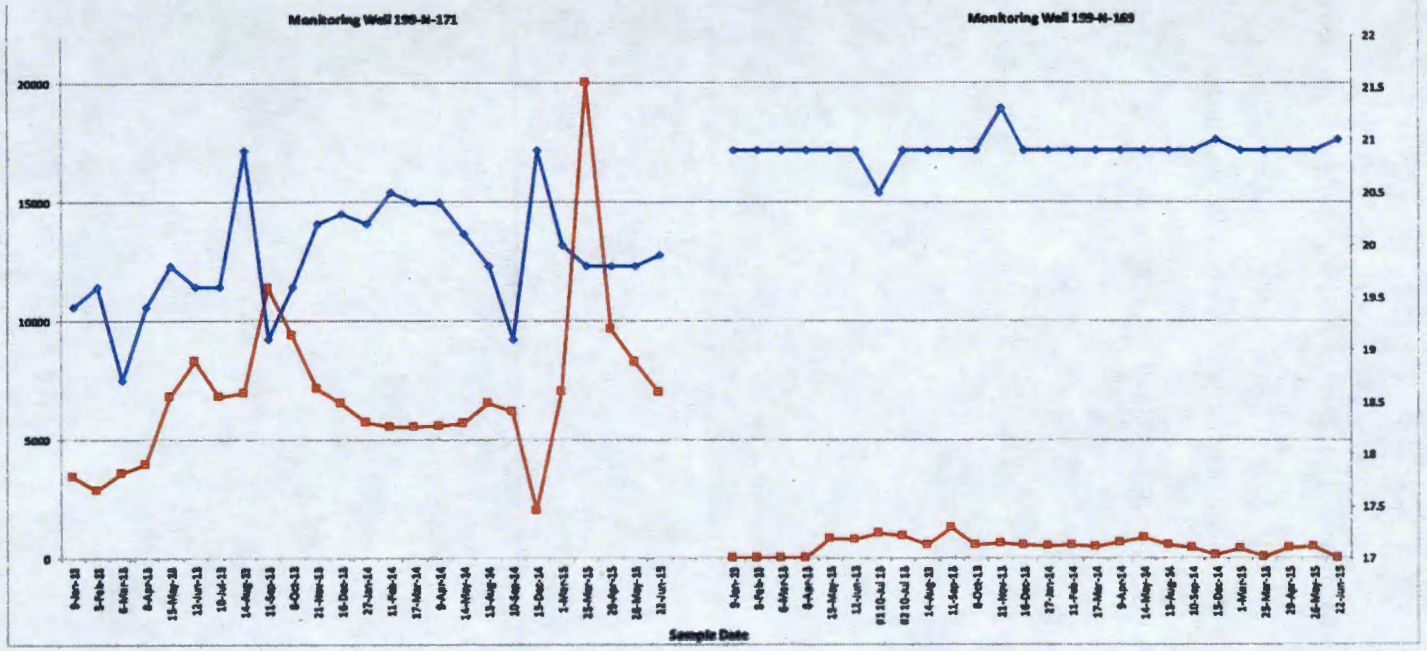
N/A = biodegration rate not calculated because of low oxygen utilization

- ***Product Recovery-*** The "smart sponge" assembly in well 199-N-18 was removed July 27, 2015, to support interface probe measurements in the well. No discernable product layer was detected. A total of 200 g of TPH was removed from groundwater by the sponge removed in July. Assuming that the TPH is diesel with a density of 0.85 g/mL, 0.24 L of diesel was removed.
- A new "smart sponge" assembly in the modified configuration (Figure NR-8) was lowered back into the well on August 4. The next sampling is scheduled for October 2015.

- Monitoring & Reporting:

  Aquifer tubes C7934, C7935, and C7936 are located adjacent to one another (Figure NR-9), with screens at depths of 14.41 ft. (C7934), 18.75 ft. (C7935), and 29.19 ft. (C7936). All three aquifer tubes were sampled on April 15, 2015, May 11, 2015, June 19, 2015, and July 27, 2015. Results through June 2015 have been received for all three aquifer tubes. Tritium and strontium-90 concentration trends are shown in Figures NR-10 and Figure NR-11, respectively.

  - The groundwater sampling event scheduled for June 2015 for the bioventing wells was performed in June during the next respirometry test.
  - The June 2015 scheduled sampling event for the apatite barrier wells was performed in June.
  - The next sampling event for RCRA monitoring wells is scheduled for September 2015.



BIOVENT WELL SAMPLE RESULTS

Well #	Date	O2%	CO2 ppm
199-N-171	9-Jan-13	19.4	3400
	5-Feb-13	19.6	2840
	6-Mar-13	18.7	3570
	8-Apr-13	19.4	3080
	15-May-13	19.6	6820
	12-Jun-13	19.6	6290
	10-Jul-13	19.6	6800
	14-Aug-13	20.9	6940
	11-Sep-13	19.1	11400
	8-Oct-13	19.6	9380
	21-Nov-13	20.2	7160
	16-Dec-13	20.3	6520
	27-Jan-14	20.2	5720
	11-Feb-14	20.5	5520
	17-Mar-14	20.4	5520
	9-Apr-14	20.4	5560
	14-May-14	20.1	5670
	13-Aug-14	19.8	6520
	10-Sep-14	19.1	6180
	15-Dec-14	20.9	2800
	1-Mar-15	20	7020
	25-Mar-15	19.8	20000
	29-Apr-15	19.8	9850
	26-May-15	19.8	8260
	22-Jun-15	18.9	7000

Well #	Date	O2%	CO2 ppm
199-N-169	9-Jan-13	20.9	0
	5-Feb-13	20.9	0
	6-Mar-13	20.9	0
	8-Apr-13	20.9	0
	15-May-13	20.9	600
	12-Jun-13	20.9	780
	#1 10-Jul 13	20.5	1020
	#2 10-Jul 13	20.9	920
	14-Aug-13	20.9	530
	11-Sep-13	20.9	1250
	8-Oct-13	20.9	550
	21-Nov-13	21.3	600
	16-Dec-13	20.9	530
	27-Jan-14	20.9	500
	11-Feb-14	20.9	550
	17-Mar-14	20.9	470
	9-Apr-14	20.9	680
	14-May-14	20.9	840
	13-Aug-14	20.9	520
	10-Sep-14	20.9	410
	15-Dec-14	21	100
	1-Mar-15	20.9	380
	25-Mar-15	20.9	15.8
	29-Apr-15	20.9	410
	26-May-15	20.9	460
	22-Jun-15	21	0

Figure NR-1. Bioventing Wells 199-N-169 and 199-N-171 Monthly Sampling Results

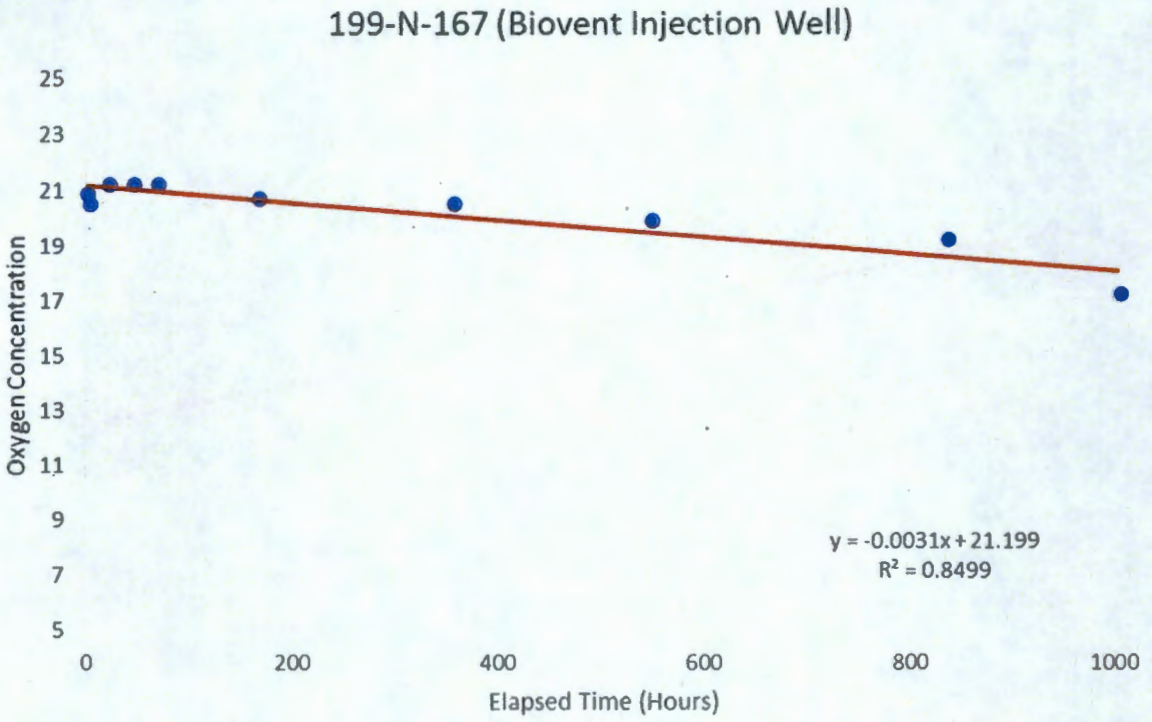


Figure N-2. Respirometry Testing Gas Sample Measurements at Well 199-N-167

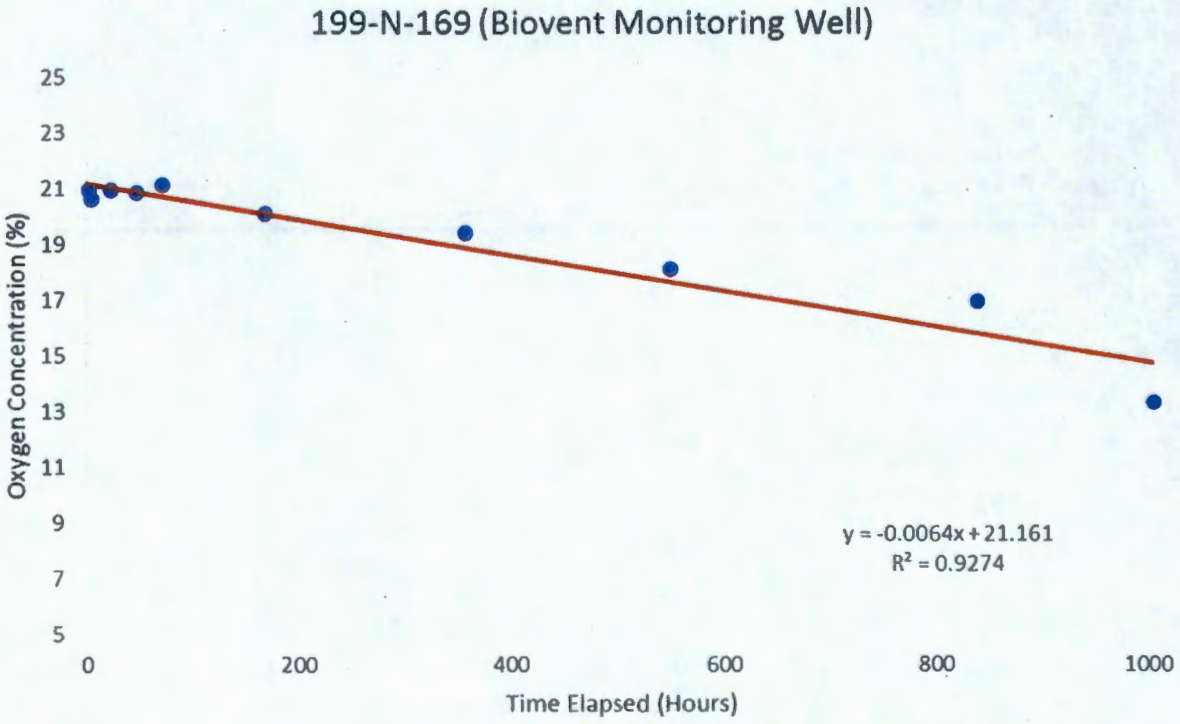


Figure N-3. Respirometry Testing Gas Sample Measurements at Well 199-N-169

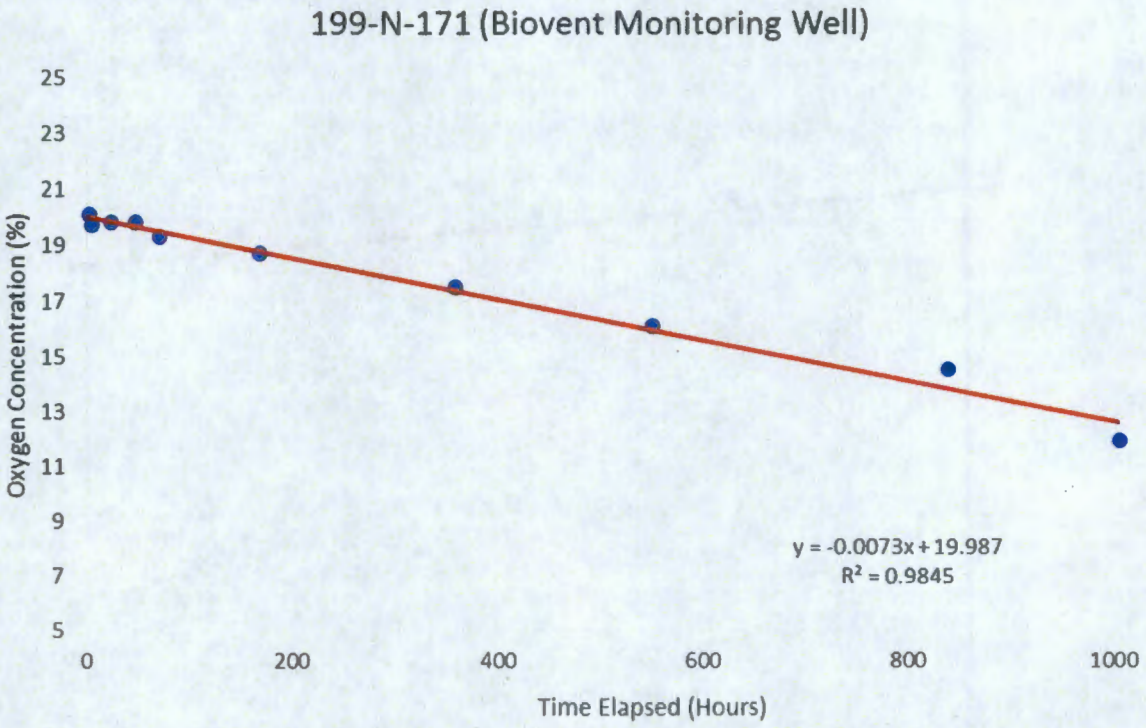


Figure N-4. Respirometry Testing Gas Sample Measurements at Well 199-N-171

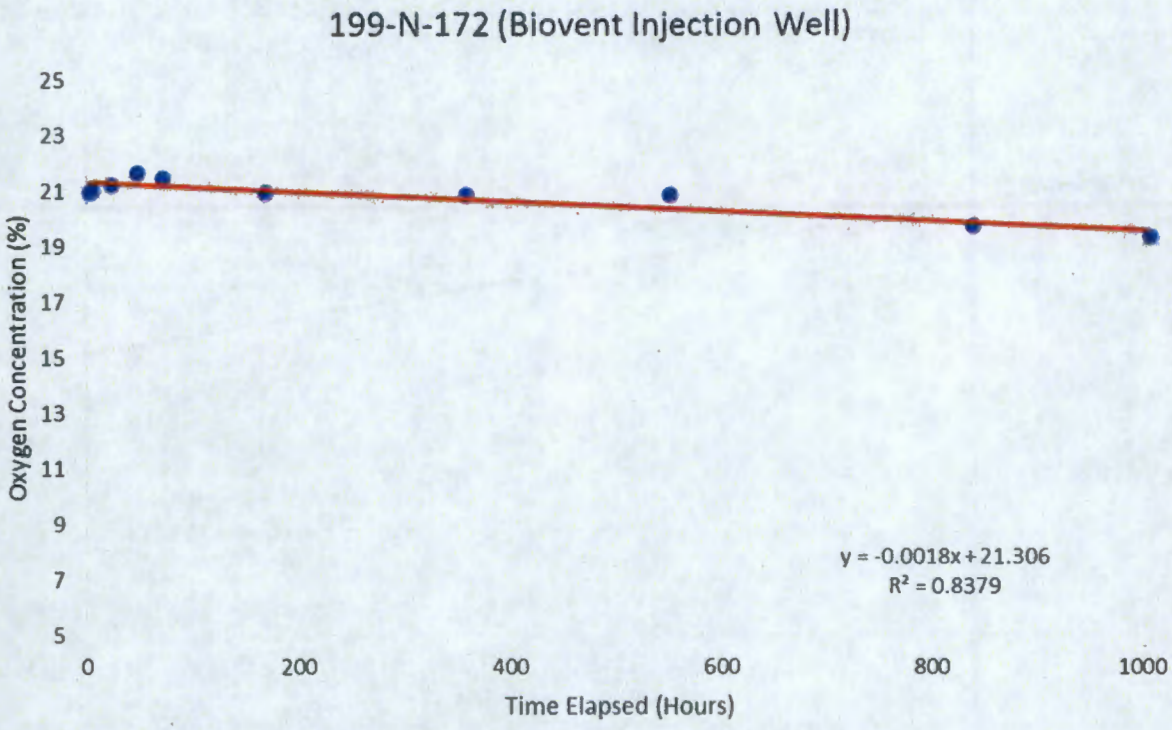


Figure N-5. Respirometry Testing Gas Sample Measurements at Well 199-N-172

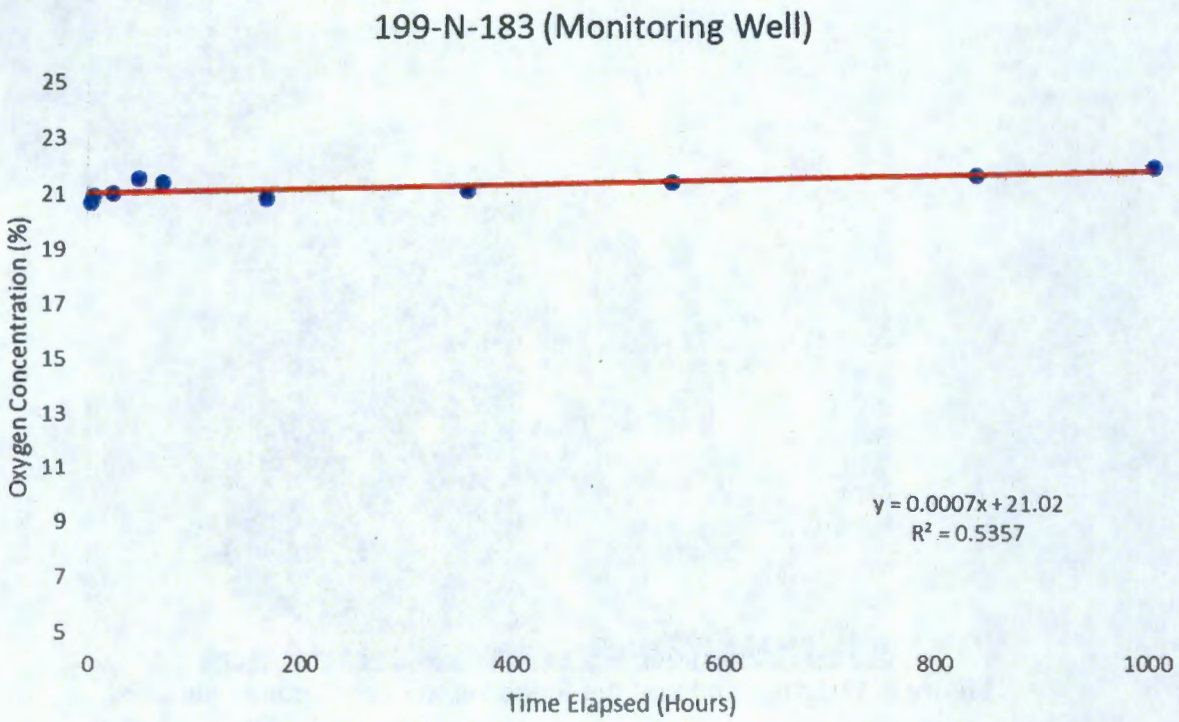


Figure N-6. Respirometry Testing Gas Sample Measurements at Well 199-N-183

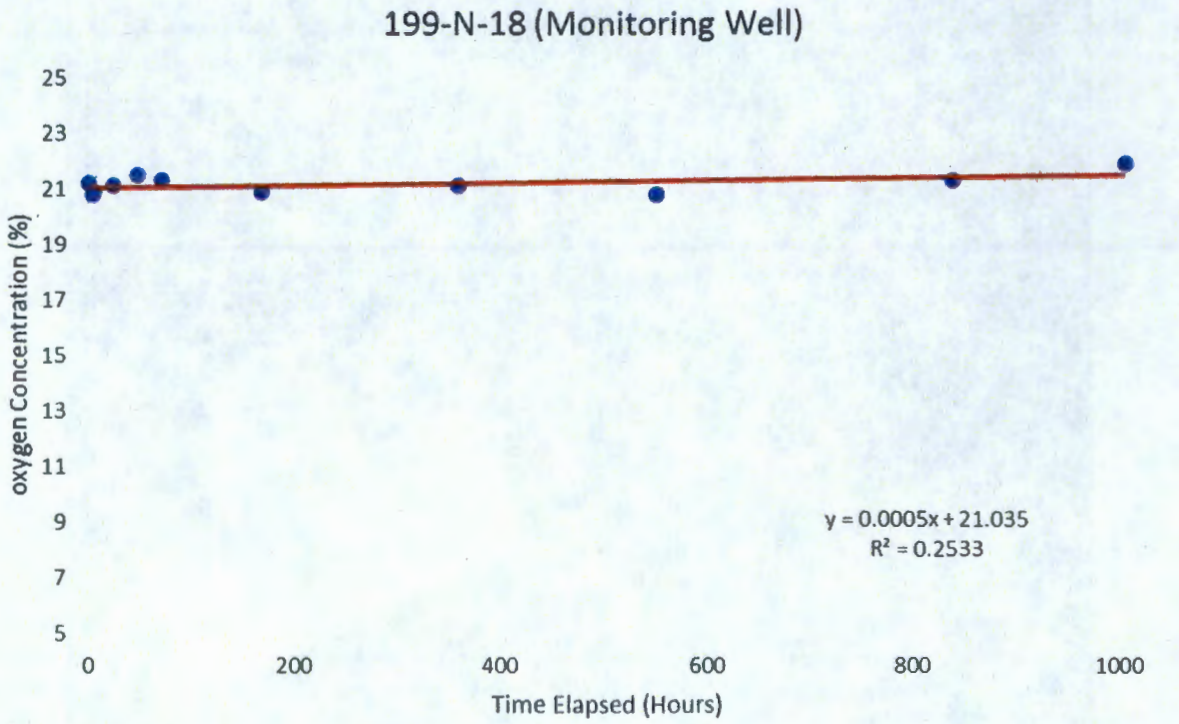


Figure N-7. Respirometry Testing Gas Sample Measurements at Well 199-N-18

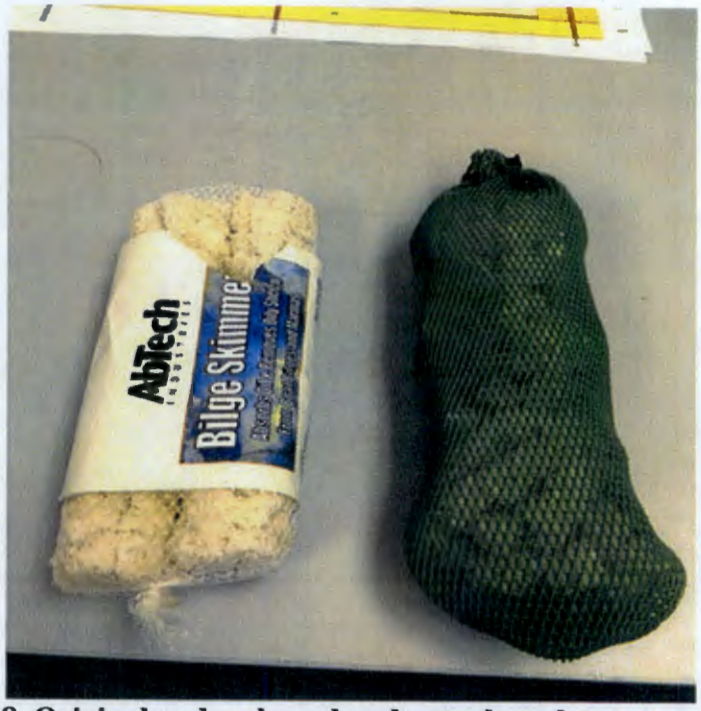


Figure 8. Original and reshaped and repackaged sponge material.

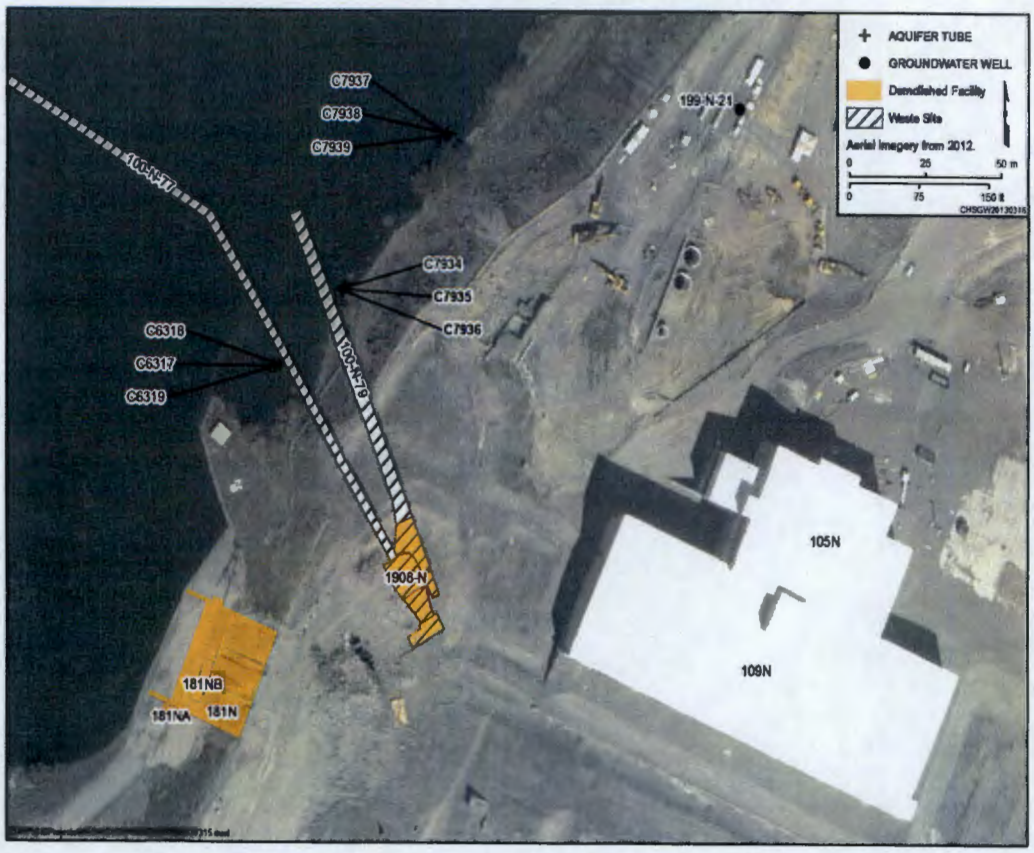


Figure NR-9. Locations of Aquifer Tubes C7934, C7935, and C7936.

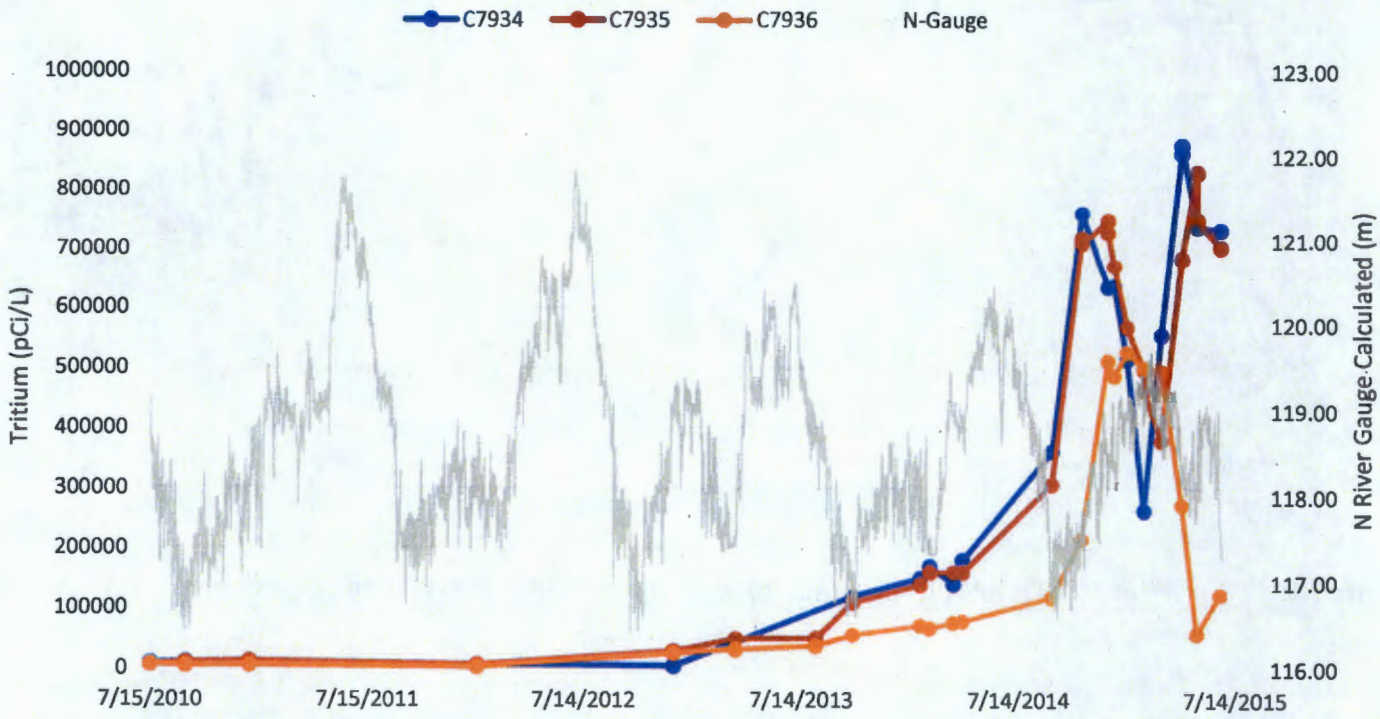


Figure NR-10 Tritium Trends through June 2015 at Aquifer Tubes C7934, C7935, and C7936

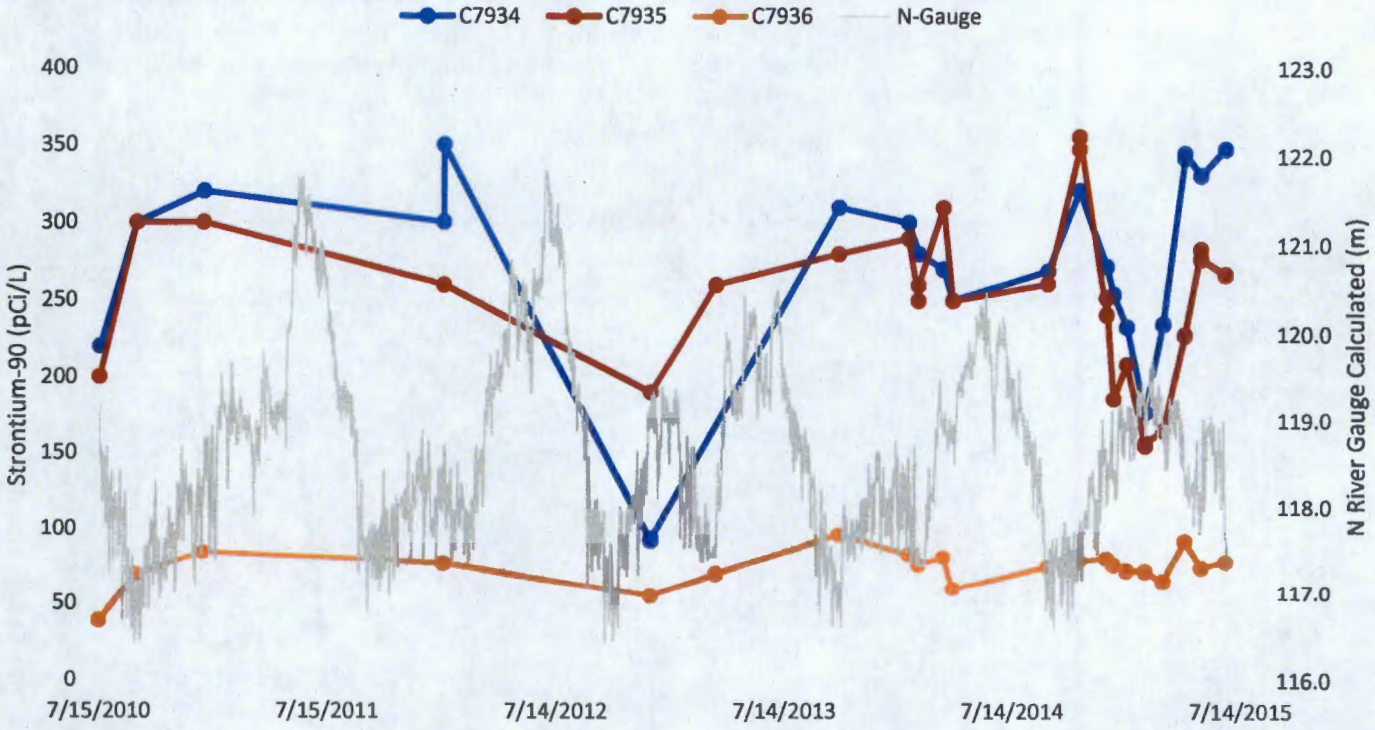


Figure NR-11. Strontium-90 Trends through June 2015 at Aquifer Tubes C7934, C7935, and C7936

100-HR-3 Groundwater Operable Unit – Mike Drewett/Kris Ivarson

- CERCLA Process Implementation:
  - RI/FS: Final Rev. 0 was transmitted to Ecology on October 17, 2014.
  - PP: Reviewed and resolved comments on Rev 0 during a May 28, 2015, meeting between RL, EPA and Ecology. Draft Rev 0 provided to Ecology on June 2, 2015, and forwarded for legal review on June 9, 2015. Ecology legal comments originally due on July 10, 2015. Ecology provided verbal feedback on July 22, 2015, that there were no show stopper comments from their legal team. Ecology provided comments to RL on August 5, 2015.
  - RD/RAWP, Monitoring Plan, and O&M Plan, Draft A plans were transmitted to Ecology on September 30, 2014. Received comments from Ecology on April 30, 2015. RL requested a 90-day extension to respond to comments on May 27, 2015. RL continuing to work on resolution of comments with Ecology.

- Remedial Actions & System Modifications
  - A summary of the number of extraction and injection wells in the DX and HX P&T systems is shown in Table H-1.
  - Well realignments are not completed, however wells are accounted for as they become operational.

Table H-1. Summary of the number of extraction and injection wells in the three systems

Wells	DX		HX		Total
	2014	2015	2014	2015	Current- as of 7/30/2015
Number of extraction wells	44	46	31	36	82
Number of injection wells	14	10	14	20	30
Notes: DX system Well 199-D8-55 was not used for injection in 2014, but was operational as an extraction well Four injection wells for DX are not counted in 2015 since they are not operating. Well realignments not completed, however wells are accounted for above as they become operational.					

  - July 2015 performance for **DX** and **HX** systems:
    - Treated: 63.75 million gallons (52.26 in June)
    - Removed: 8.93 kg of Cr(VI) (7.85 in June).

Summaries of the volume of groundwater treated and Cr(VI) removed for the 100-DX and 100-HX pump-and-treat systems are shown in Figures H-2 and H-3, respectively. A general reduction in Cr(VI) mass removal over time, a function of progress of remediation with associated reduction in groundwater contaminant concentration, is exhibited at both DX and HX. The drop in concentrations is more pronounced at DX, where concentrations were

previously at very high levels. Influent concentrations at DX continue to decline as remediation progresses.

- The current influent and effluent Cr(VI) concentrations (measure once weekly) for the two HR-3 systems (as measured on July 29, 2015) are:
  - DX – Influent = 64 µg/L; Effluent = 1 µg/L
  - HX – Influent = 18 µg/L; Effluent = less than detection
- Well realignment activities are continuing, with piping and electrical work ongoing.

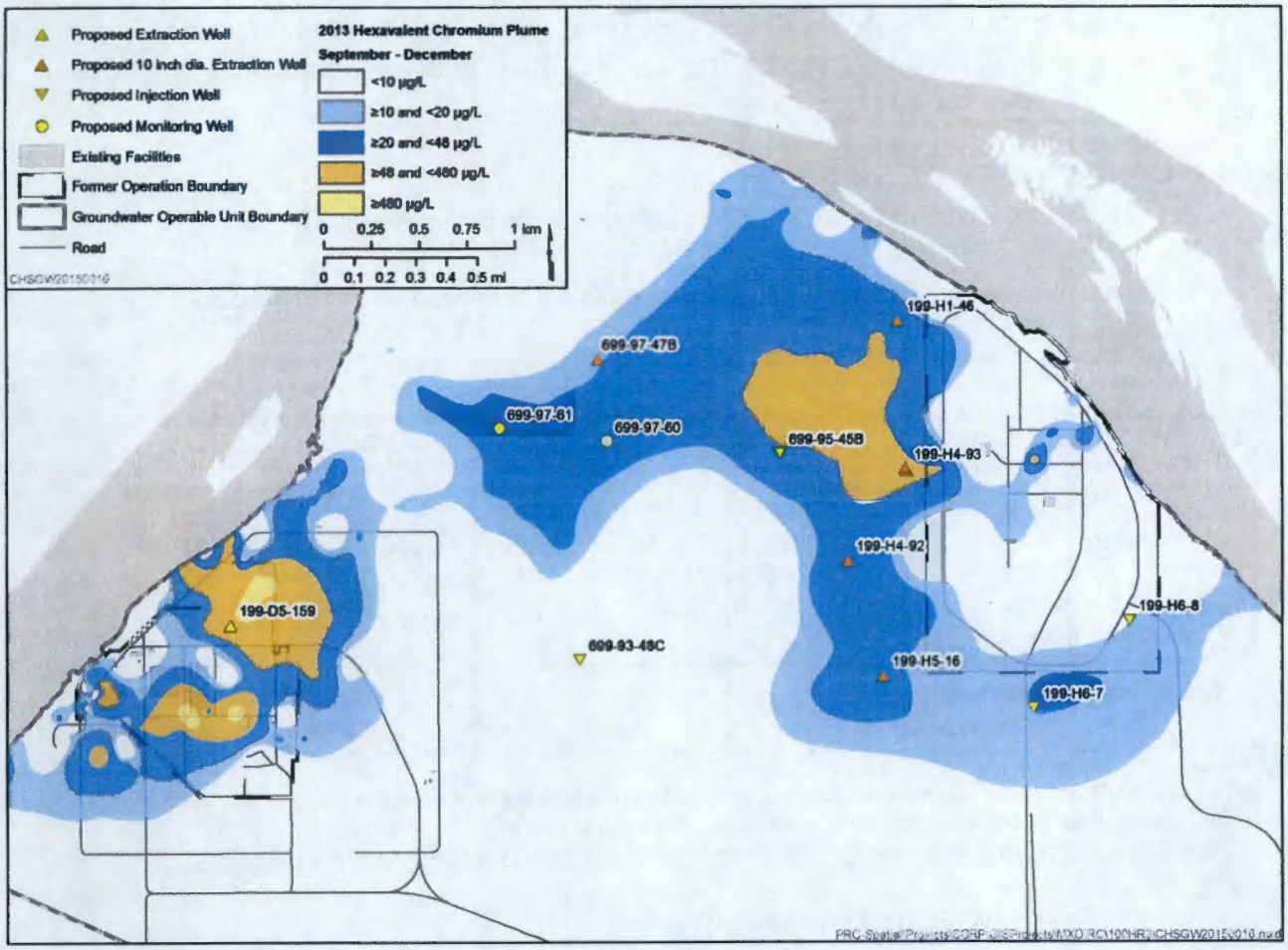


Figure H-1. New Well Locations Planned for FY15

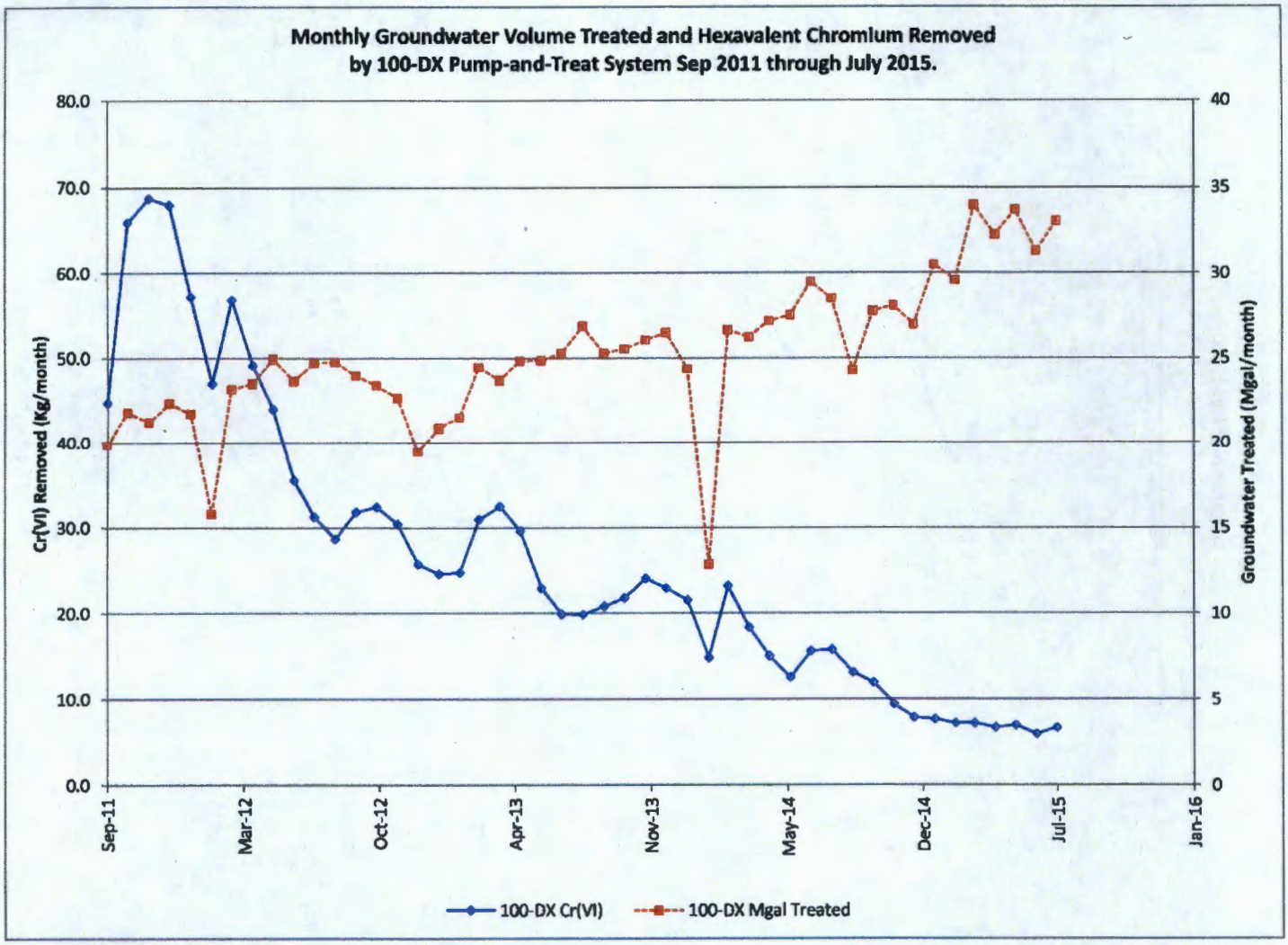


Figure H-2. Monthly Cr(VI) removed and groundwater volume treated by 100-DX pump-and-treat, September 2011 through July 2015.

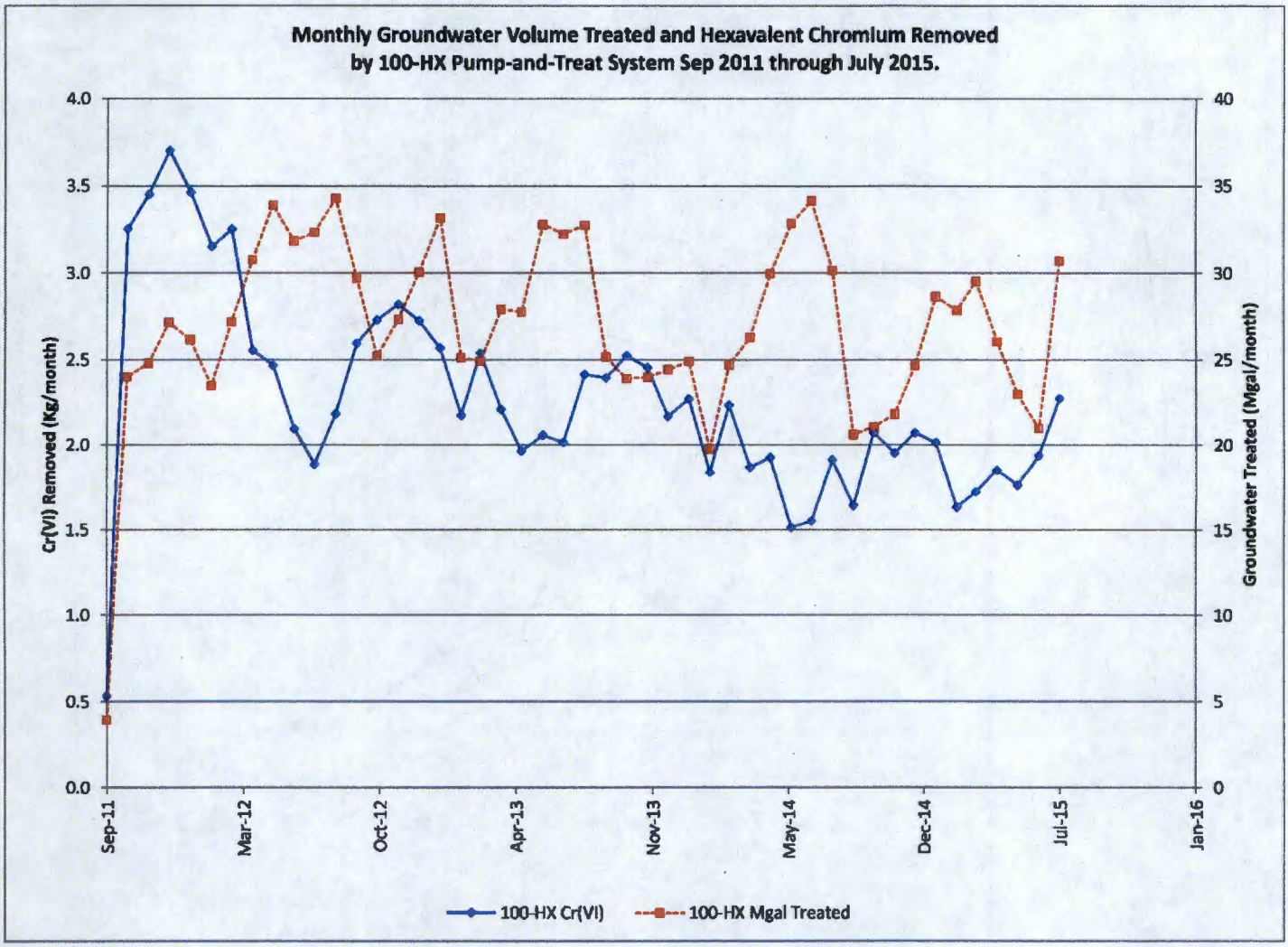


Figure H-3. Monthly Cr(VI) removed and groundwater volume treated by 100-HX pump-and-treat, September 2011 through July 2015.

100-FR-3 Groundwater Operable Unit – Robert Evans/Mary Hartman

- CERCLA Process Implementation:
  - Completed revision to the Draft A RDR/RAWP and addressed/incorporated EPA's comments. Revision 0 is scheduled to be delivered no later than August 31, 2015.

- Monitoring & Reporting:

  Data from three wells sampled in June were loaded into HEIS. Strontium-90 concentrations declined to 11 pCi/L in 199-F5-1 and increased to 176 pCi/L in 199-F5-55 (Figure F-1). Concentrations remained below the DWS in 199-F5-46. The next groundwater sampling event (full network) is scheduled for October.

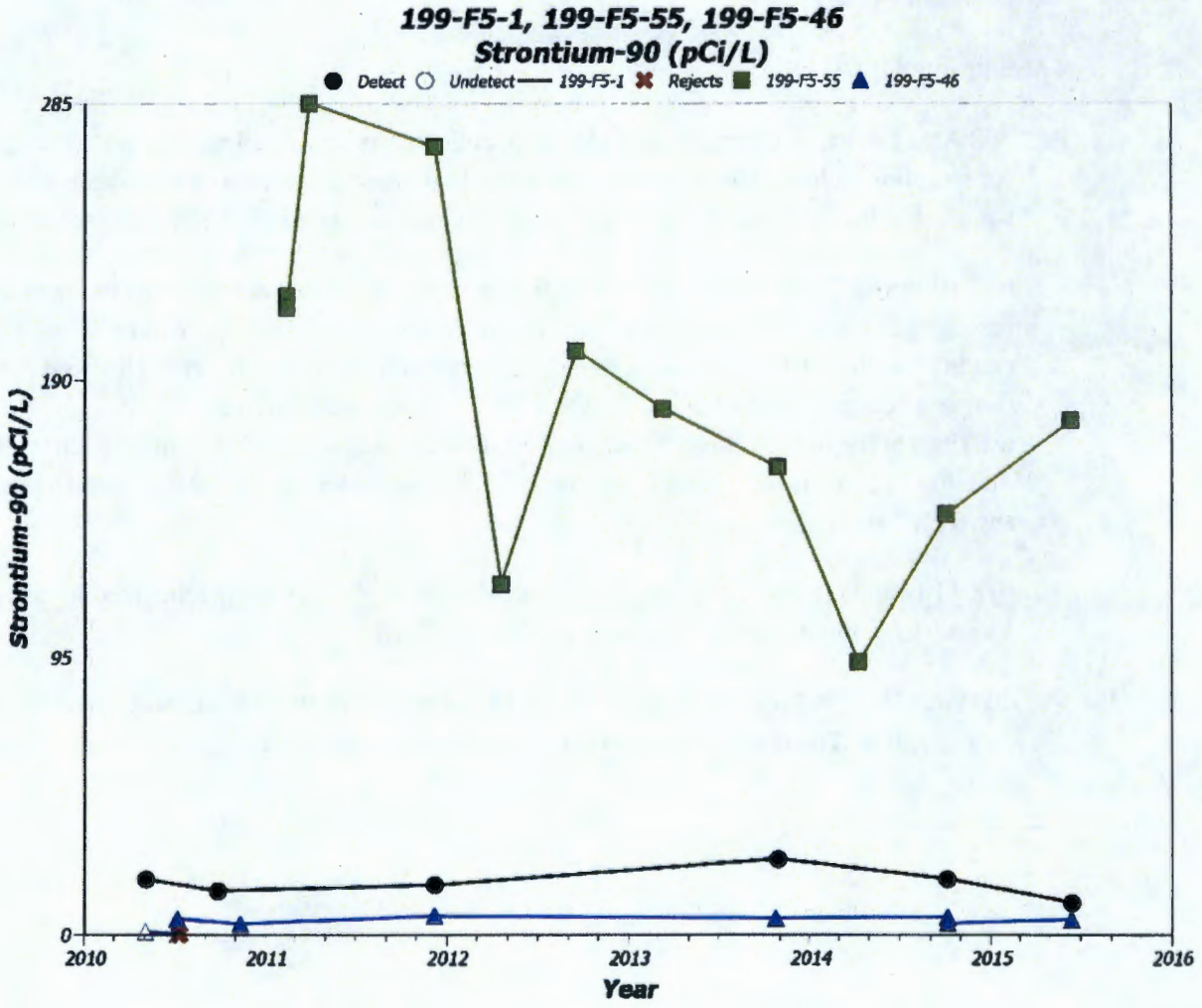


Figure F-1. Strontium-90 in Eastern 100-F

300-FF-5 Groundwater Operable Unit – Patrick Baynes/Virginia Rohay/Randy Hermann

- CERCLA Process Implementation:
  - Nothing new to report.
- Remedial Actions:
  - Completed well construction on all 11 aquifer and all 10 PRZ monitoring wells.
- Monitoring & Reporting:
  - Resolved EPA comments on Draft A, 300-FF-5 OU Remedy Implementation SAP (DOE/RL-2014-42) to EPA.
  - Monitoring Overview:
    - 300 Area Industrial Complex: Samples were collected as scheduled at 35 of the 44 wells scheduled for sampling in June. The other nine wells required maintenance. Six of these nine wells were sampled in July, two will be sampled in early August, and one still requires maintenance.
    - 618-10 Burial Ground/316-4 Crib: Samples have been collected at two of the five wells scheduled for sampling in June. The other three wells are not currently accessible but will be sampled as soon as conditions allow. (A maintenance request has been submitted for one well. One well cannot be sampled because of extreme fire danger. One well is currently inaccessible because of remediation activities at the 618-10 Burial Ground.) TPA-CN-669 was approved on June 26, 2015, to discontinue monitoring at wells 699-S6-E4L and 699-S6-E4A, which will be decommissioned to support waste site remediation.
    - 618-11 Burial Ground: Samples have been collected at all three wells scheduled for sampling in July. The next sampling event is scheduled for October 2015.
    - 300 Area Process Trenches (316-5) RCRA Monitoring: The wells were sampled on July 21 and July 22, 2015. The next sampling event is scheduled for August 2015.

Hanford Sampling Program Information

Table 1 Wells, Aquifer Tubes, and Springs in the River Corridor Areas Successfully Sampled in July 2015

100-BC	100-FR	100-HR-D	100-HR-H	100-KR	100-NR	1100-EM	300-FF
199-B4-1		199-D4-26	199-H1-25	199-K-117A	199-K-150		399-1-1
199-B4-14		199-D4-86	199-H1-27	199-K-139	199-N-167		399-1-10A
199-B4-16		199-D4-92	199-H1-6	199-K-166	199-N-169		399-1-10B
199-B4-18		199-D4-93	199-H4-75	199-K-18	199-N-171		399-1-16A
199-B4-7		199-D4-95	49-D	199-K-19	199-N-172		399-1-16B
199-B5-1		199-D4-96	50-S	199-K-20	199-N-173		399-1-17A
199-B5-10		199-D4-97	699-100-43B	199-K-202	199-N-183		399-1-17B
199-B5-11		199-D4-98	699-101-45	199-K-205	199-N-19		399-1-18A
199-B5-12		199-D4-99	699-89-35	C7641	199-N-211		399-1-18B
199-B5-13		199-D5-101	699-90-37B	C7642	199-N-229		399-1-6
199-B5-14		199-D5-103	AT-H-1-M	C7643	199-N-248		399-2-1
199-B5-6		199-D5-104	C5641		199-N-3		399-3-18
199-B5-9		199-D5-127	C6288		199-N-56		399-3-2
199-B8-9		199-D5-130	C7650		199-N-96A		399-4-7
C8840		199-D5-131			C6132		699-12-2C
C8841		199-D5-145			C6132		699-13-2D
C8842		199-D5-146			C6134		699-13-3A
C8843		199-D5-159			C7934		
C8844		199-D5-20			C7935		
C8845		199-D5-32			C7936		
C8847		199-D5-34			N116mArray-1A		
C8848		199-D5-39			N116mArray-3A		
C8849		199-D5-40			N116mArray-3A		
C8851		199-D7-3			N116mArray-4A		
C8852		199-D7-6			NVP1-1		
C8853		199-D8-101					
C8855		199-D8-4					
C8856		199-D8-54A					
C8859		199-D8-89					
C8860		199-D8-90					
C8861		199-D8-91					
C9441		199-D8-95					
C9442		199-D8-96					
C9443		199-D8-97					
C9444		199-D8-98					
C9445		AT-D-2-S					
C9446		C7648					
		DD-15-3					
		DD-16-4					

100/300 Areas Unit Managers Meeting
August 13, 2015

100-BC	100-FR	100-HR-D	100-HR-H	100-KR	100-NR	1100-EM	300-FF
		DD-49-3					
		DD-50-4					

Table 2 Fiscal Year 2015 Sample Trips in the River Corridor Areas Awaiting at the end of July 2015

Quarter Scheduled	GW Interest Area	Sample Type	Site Name	Scheduled Date	Frequency	Months Remain	Status	Comment
FY 2015 Q1	100-KR	WELL	199-K-132	11/1/2014	Biannual	0	Late	Review for cancelation
		SPRING	SK-077-1	10/1/2014	Annual	2	OK	
	100-NR	AQUIFER TUBE	C6135	10/1/2014	Biannual	0	Late	Sample Dry, Review for cancelation
FY 2015 Q3	100-FR	WELL	199-F5-6	6/1/2015	Biannual	4	OK	Maintenance Required
	100-HR-D	WELL	199-D8-73	6/1/2015	Quarterly	1	OK	Maintenance Required
		WELL	199-H4-82	6/1/2015	Quarterly	1	OK	P&T Well, not running
		AQUIFER TUBE	DD-39-1	5/1/2015	Biannual	3	OK	
	100-HR-H	WELL	199-H1-3	6/1/2015	Quarterly	1	OK	P&T Well, not running
		WELL	199-H4-76	6/1/2015	Quarterly	1	OK	P&T Well, not running
	100-KR	WELL	199-K-132	5/1/2015	Biannual	3	OK	Review for cancelation
	100-NR	WELL	199-N-136	6/1/2015	Quarterly	1	OK	Maintenance Required
		WELL	199-N-200	6/1/2015	Quarterly	1	OK	
		WELL	199-N-210	6/1/2015	Biannual	1	OK	
		WELL	199-N-230	6/1/2015	Quarterly	1	OK	Access Restricted
		WELL	199-N-247	6/1/2015	Quarterly	1	OK	Access Restricted
		AQUIFER TUBE	C6136	6/1/2015	Quarterly	1	OK	
	300-FF	WELL	399-3-1	6/1/2015	Biannual	4	OK	Access Restricted
		WELL	399-3-6	6/1/2015	Biannual	4	OK	Not on WAL
		WELL	399-4-1	6/1/2015	Biannual	4	OK	Access Restricted
		WELL	699-S6-E4B	6/1/2015	Biannual	4	OK	Access Restricted
		WELL	699-S6-E4E	6/1/2015	Biannual	4	OK	Access Restricted
		WELL	699-S6-E4L	6/1/2015	Quarterly	1	OK	Access Restricted
FY 2015 Q4	100-FR	WELL	699-87-42A	7/1/2015	Biannual	2	OK	Maintenance Required
	100-HR-D	WELL	199-D4-19	7/1/2015	Quarterly	2	OK	Access Restricted
		WELL	699-93-48C	7/1/2015	Annual	11	OK	
		WELL	699-97-61	7/1/2015	Annual	11	OK	Not on WAL
	100-HR-H	WELL	199-H1-8	7/1/2015	Annual	11	OK	Not on WAL
		WELL	199-H4-92	7/1/2015	Annual	11	OK	Not on WAL
		WELL	199-H4-93	7/1/2015	Annual	11	OK	Access Restricted
		WELL	199-H5-16	7/1/2015	Annual	11	OK	Not on WAL
		WELL	699-88-41	7/1/2015	Biannual	2	OK	Maintenance Required
		WELL	699-90-34	7/1/2015	Annual	11	OK	Maintenance Required
		WELL	699-90-38	7/1/2015	Annual	11	OK	Not on WAL
		WELL	699-97-60	7/1/2015	Annual	11	OK	Not on WAL
	100-KR	WELL	199-K-173	7/1/2015	Quarterly	2	OK	P&T Well, not running
		WELL	199-K-221	7/1/2015	Quarterly	2	OK	Not on WAL
		WELL	199-K-222	7/1/2015	Quarterly	2	OK	Not on WAL
	100-NR	WELL	199-N-19	7/20/2015	Quarterly	1	OK	
		AQUIFER TUBE	N116mArray-0A	7/20/2015	Quarterly	1	OK	

Table 3 Groundwater Sampling Locations in the River Corridor Areas Scheduled to be Sampled in August 2015

100-BC	100-FR	100-HR-D	100-HR-H	100-KR	100-NR	1100-EM	300-FF
199-B4-14		199-D2-11	199-H1-32	199-K-106A	199-K-150		399-1-10A
C8840		199-D3-5	199-H1-33	199-K-107A	C7934		399-1-10B
C8841		199-D4-39	199-H1-35	199-K-108A	C7935		399-1-16A
C8842		199-D5-103	199-H1-37	199-K-111A	C7936		399-1-16B
C8843		199-D5-104	199-H1-38	199-K-140			399-1-17A
C8844		199-D5-106	199-H1-40	199-K-141			399-1-17B
C8845		199-D5-132	199-H1-7	199-K-157			399-1-18A
C8847		199-D5-133	199-H2-1	199-K-168			399-1-18B
C8848		199-D5-142	199-H3-10	199-K-184			
C8849		199-D5-143	199-H3-3	199-K-185			
C8851		199-D5-145	199-H3-4	199-K-186			
C8852		199-D5-146	199-H3-5	199-K-187			
C8853		199-D5-147	199-H3-6	199-K-188			
C8855		199-D5-34	199-H3-7	199-K-189			
C8856		199-D5-40	199-H3-9	199-K-190			
C8859		199-D5-92	199-H4-11	199-K-191			
C8860		199-D5-97	199-H4-12A	199-K-192			
C8861		199-D6-3	199-H4-12C	199-K-193			
C9441		199-D8-71	199-H4-15A	199-K-194			
C9442		699-93-48A	199-H4-15CP	199-K-196			
C9443		699-95-48	199-H4-16	199-K-197			
C9444		699-95-51	199-H4-4	199-K-198			
C9445		699-96-52B	199-H4-46	199-K-199			
C9446		699-97-51A	199-H4-49	199-K-200			
		699-98-49A	199-H4-65	199-K-201			
		699-98-51	199-H4-83	199-K-208			
			199-H4-85	199-K-209			
			199-H4-86	199-K-210			
			199-H5-1A	199-K-212			
			699-94-41	199-K-220			
			699-94-43	199-K-32A			
			699-95-45	199-K-32B			
			699-97-41	199-K-34			
			699-98-46	699-78-62			
			699-99-41				
			699-99-44				

100/300 Areas Unit Managers Meeting
August 13, 2015

Documents for AR Submission

Number	Title	Referencing Doc/Driver
SGW-49370, 2011	Columbia River Pore Water Sampling in 100-N Area, December 2010, Rev. 0	DOE/RL-2015-05 R0
WHC-C-89-047-100N-20, 1989	Critique Report, 184-N Powerhouse Diesel Oil Leak (April 26, 1989), Rev. 2	DOE/RL-2015-05 R0
ECF-HANFORD-14-0034, 2014	Calculation and Depiction of Groundwater Contamination for the Calendar Year 2013 (CY2013) Hanford Site Groundwater Monitoring Report, Rev. 0	DOE/RL-2015-05 R0
DOE/RL-2015-07, 2015	Hanford Site Groundwater Monitoring Report for 2014, Rev. 0	DOE/RL-2015-05 R0
ECF-HANFORD-12-0078. 2013	Assessment of the River Protection Objective: Calculation for Calendar Year 2011 (CY2011), Rev. 0,	DOE/RL-2015-05 R0
ECF-Hanford-13-0028, 2014	Columbia River Stage Correlation for the Hanford Area, Rev. 0	DOE/RL-2015-05 R0
SGW-58920, R0	RCRA Groundwater Quarterly Report for October through December 2014	cleared July 2015
SGW-58475, R1	Post-Closure Corrective Action Groundwater Monitoring Report for the 183H Solar Evaporation Basins and the 300 Area Process Trenches: January – June 2014	cleared July 2015
PNL-6470, 1986	Revised Ground-Water Monitoring Compliance Plan for the 183-H Solar Evaporation Basins	needed to support the 2015 RCRA groundwater monitoring plan updates
ECF-300FF5-11-0152, 2012	VOC Modeling in Support of 300 Area FF-5 RI/FS Document, Rev. 0	needed to support the 2015 RCRA groundwater monitoring plan updates

Attachment 2

100K Area Report
100/300 Area Unit Manager Meeting
August 13, 2015

RL-0012 Sludge Treatment Project

TPA Milestone **M-016-177**, *Complete 105-KW sludge transfer equipment installation.* (**9/30/17**) – On Schedule

- Statements of Work for ECRTS equipment procurement are in development. Equipment procurements have been grouped into 18 separate procurement sets. Fifteen procurement sets have been fully developed and are in the formal acquisition process. One procurement has been completed.
- Substantial progress has been made in restoring the design for the Sludge Transport and Storage Container auxiliary ventilation system to support nuclear safety requirements.
- Planning in support of in-basin construction continues.

TPA Milestone **M-016-175**, *Begin sludge removal from 105-KW Fuel Storage Basin* (**9/30/18**) – On Schedule

- EPA has provided a letter to RL formalizing expectations to satisfy new TPA milestone dates. In accordance with those expectations, a draft Explanation of Significant Difference (ESD) has been drafted and a public review is planned for September. The 30-day pre-notice required by the TPA has been issued. The ESD will modify the 100 K Area K Basins Record of Decision to provide for longer storage of K Basins sludge prior to treatment.
- The Washington State Department of Ecology provided a letter to RL to confirm that the planned activities that need to be completed at T Plant to prepare for receipt and storage of sludge would not require permit modifications.
- ECRTS tooling and equipment fabrication, testing, and operating procedure and training development continue.

TPA Milestone **M-016-176**, *Complete sludge removal from 105-KW Fuel Storage Basin* (**12/31/19**) – On Schedule

- Initiation of this milestone follows completion of Milestone M-016-175.

TPA Milestone **M-016-178**, *Initiate deactivation of 105-KW Fuel Storage Basin.* (**12/31/19**) – On Schedule

- Initiation of this milestone follows completion of Milestone M-016-176, but the following pre-deactivation actions are underway:
    - Integrated Water Treatment System garnet filter media removal system design, and Skimmer System sand filter media sampling and characterization activities continue.
    - Dose to curie modeling of basin below-water debris, utilizing data collected by KW Basin operations while clearing the ECRTS footprint, continues. The characterization data produced from these models will become a key input to the KW Basin ERDF compliant calculation.

TPA Milestone **M-016-173, Select** *K Basin sludge treatment and packaging technology and propose new interim sludge treatment and packaging milestones.*
(**9/30/22**) – On Schedule

- The preliminary treatment and packaging site evaluation report and the remedial design/remedial action work plan (DOE/RL-2011-15) for sludge treatment and packaging have been issued.

TPA Milestone **M-016-181,** *Complete deactivation, demolition and removal of 105-KW Fuel Storage Basin*
(**9/30/23**) – On Schedule

TPA Milestone **M-016-186,** *Initiate soil remediation under the 105-KW Fuel Storage Basin.*
(**12/31/23**) – On Schedule

RL-0041 K Facility Demolition and Soil Remediation

TPA Milestone **M-016-143**, *Complete the interim response actions for 100 K Area within the perimeter boundary and to the Columbia River for Phase 2 actions. Phase 2 is defined in the 100 K Area RD/RA Work Plans.*
(**9/30/24**) – On Schedule

- Preparation is underway to initiate remediation in the AB waste site area prior to the end of September 2015.

TPA Milestone **M-093-28**, *Submit a change package for proposed interim milestones for 105-KE and 105-KW Reactor Interim Safe Storage*
(**12/31/19**) - On Schedule

TPA Milestone **M-093-27**, *Complete 105-KE and 105-KW Reactor Interim Safe Storage in Accordance with the Removal Action Work Plan.*
(**9/302024**) - On Schedule

TPA Milestone **M-016-00C**, *Complete all response actions for the 100 K Area*
(**9/30/24**) - On Schedule

Other Information and Status Updates

100K Bore Holes
Well construction was completed at 116-KE-3, but final well development has been delayed due to an equipment repair. Drilling commenced at the UPR-100-K-1 borehole on July 7, 2015, and as of August 10, 2015 the borehole has been drilled and sampled to a depth of 67' below ground surface. Moderate levels of contamination were encountered with field instrumentation within the first 15' of native material, with levels decreasing to background since those depths.

(2)

Attachment 3

August 13, 2015 Unit Manager's Meeting
Closure Operations Status

100-B/C

- Awaiting revegetation

100-D

- Exhausted material in Pit 21for backfill of 100-D waste sites. Minor quantities of borrow is still required from the 100-H pit to complete 100-D-31:11 and 12 and 100-D-86:3.
- Preparing work orders and scheduling for replacement wells.

100-H

- Finalizing closure documents for 100-H-59:2
- Continuing backfill at 100-H-28 pipelines, 100-H-42, and 100-H-44
- Finalizing closure documentation for 100-H-28:2 and 100-H-42
- 100-H-36 outfall structure sampling completed
- Preparing work orders and scheduling for replacement wells

100-N

- Finalizing closure documentation for 100-N-96
- Backfill of 100-N-96 will occur as fire danger levels allow.

618-10 Trench Remediation

- Completed scraping, surveying and applying fixative to floor of trench
- Continued primary and secondary sorting and load-out
- Continued preparations for uranium oxide drum processing
- Continued preparations for remediation of VPU-like anomalies
- Continued non-destructive examination of concrete drums

618-10 VPU Remediation

- Continued preparations and mock-ups for VPU augering
- VPU characterization SAP routed to EPA for approval
- Preparing for low-level waste VPU retrieval in FY16

100-IU-2/6

- Finalizing closure documentation for 600-358 and 600-20
- Prepare for startup of 600-326 as fire danger level and crew availability allows.

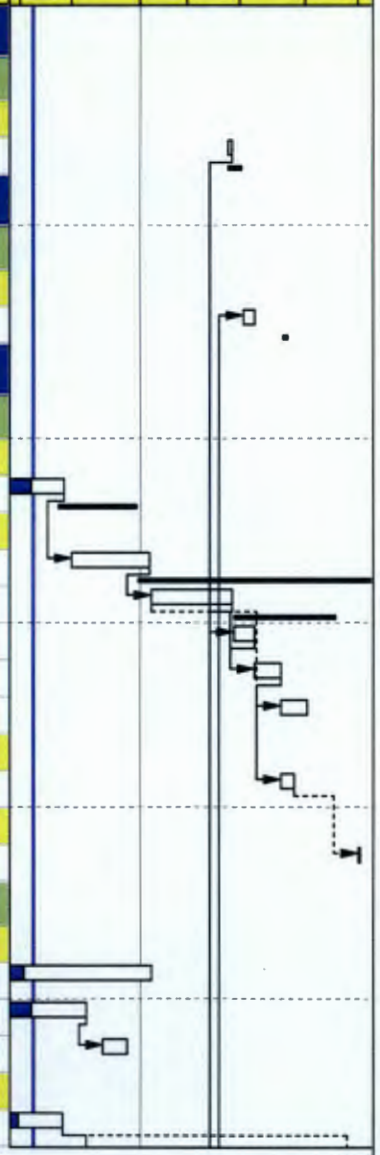
Attachment 4

Data Date: 03-Aug-15

100 Area UMM Schedule

06-Aug-15 07:43

Activity ID	Activity Name	Start	Finish
100 B/C			
100-B-35:1			
Revegetation			
BB524E10	100-B-35 Reveg (11.5 Acres)	16-Nov-15*	18-Nov-15
100 D			
100-D-100			
Revegetation			
100D100A280	Reveg 100-D-100 (10 acres)	24-Nov-15	30-Nov-15
100 H			
100-H-59:2			
WI and Closeout Sampling			
H592061	Closure Sampling 100-H-59:2	06-Jul-15 A	20-Aug-15
Final Project Closeout			
H592071	Prepare Closure Doc 100-H-59:2	24-Aug-15	05-Oct-15
H592081	RL/Reg Review Draft A Closure Doc 100-H-59:2	06-Oct-15	18-Nov-15
H592083	Resolve RL/Reg Comments Draft A Clos Doc 100-H-59:2	19-Nov-15	30-Nov-15
H592091	RL/Reg Sign Rev 0 Closure Doc 100-H-59:2	01-Dec-15	14-Dec-15
H592111	Prepare and Issue Rev 0 Closure Doc 100-H-59:2	15-Dec-15	28-Dec-15
Backfill			
H592021	Recontour 100-H-59:2 (1,300 BCMs)	15-Dec-15	21-Dec-15
Revegetation			
H592101	Revegetate 100-H-59:2 (2 acres)	25-Jan-16	25-Jan-16
100-H-28:2			
Final Project Closeout			
HB511D64	Prepare Draft A Closure Doc for 100-H-28:2	21-May-15 A	06-Oct-15
HB511D65	RL/Reg Review Draft A Closure Doc for 100-H-28:2	20-Jul-15 A	01-Sep-15
HB511D67	RL/Reg Sign Rev. 0 Closure Doc for 100-H-28:2	10-Sep-15	23-Sep-15
Backfill			
HB511C05	Backfill 100-H-28:2 (127,157 BCMs)	15-Jul-15 A	19-Aug-15



Current Bar Labels % Complete
Project Baseline Milestone

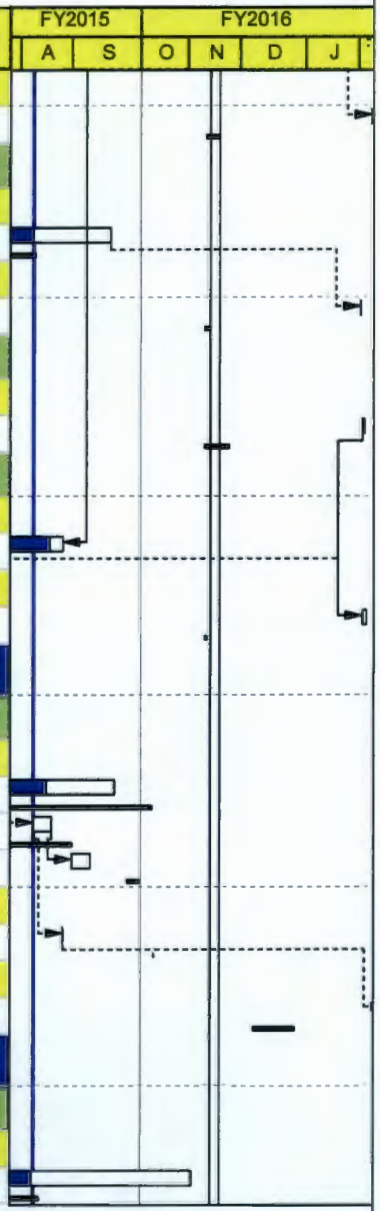
Closure Operations

Data Date: 03-Aug-15

100 Area UMM Schedule

06-Aug-15 07:43

Activity ID	Activity Name	Start	Finish
Revegetation			
HB511E07	Reveg 100-H-28:2 (12.1 Acres)	01-Feb-16	03-Feb-16
100-H-28:3			
Backfill			
HB512C	Backfill 100-H-28:3 (45,546 BCMs)	16-Jul-15 A	14-Sep-15
Revegetation			
HB512E	Reveg 100-H-28:3 (10.0 acres)	26-Jan-16	26-Jan-16
100-H-28:4			
Revegetation			
HB513E50	Reveg 100-H-28:4 (2.8 Acres)	27-Jan-16	27-Jan-16
100-H-28:5			
Backfill			
HB514C	Backfill 100-H-28:5 (33,041 BCMs)	14-Jul-15 A	19-Aug-15
Revegetation			
HB514E	Reveg 100-H-28:5 (4.0 acre)	27-Jan-16	28-Jan-16
IU-2/6			
600-358			
Final Project Closeout			
IU225940	Prepare Closure Doc 600-358	14-May-15 A	16-Sep-15
IU225950	RL/Reg Review of Draft A Closure Doc 600-358	03-Aug-15	13-Aug-15
IU225960	RL/Reg Sign Rev.0 Closure Doc 600-358	24-Aug-15	03-Sep-15
Backfill			
IU225990	Backfill 600-358 (1,818 BCMs) MHVs	19-Aug-15	19-Aug-15
Revegetation			
IU226000	Reveg 600-358 (2 acres)	10-Feb-16	10-Feb-16
100 N			
100-N-85			
Final Project Closeout			
NB588DW	Prepare WSRF - 100-N-85	26-Mar-15 A	27-Oct-15



Current Bar Labels % Complete
Project Baseline Milestone

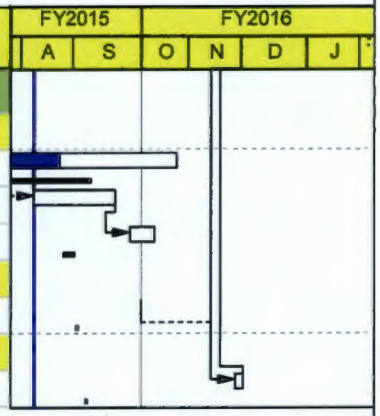
Closure Operations

Data Date: 03-Aug-15

100 Area UMM Schedule

06-Aug-15 07:43

Activity ID	Activity Name	Start	Finish
100-N-96			
Final Project Closeout			
NB5C3D05	Prepare Closure Doc - 100-N-96	14-May-15 A	19-Oct-15
NB5C3D06	RL/Reg Review Draft A Closure Doc for 100-N-96	03-Aug-15	16-Sep-15
NB5C3D07	RL/Reg Sign Rev. 0 Closure Doc for 100-N-96	24-Sep-15	07-Oct-15
Backfill			
NB5C3C	Backfill 100-N-96 (2,545 BCMs)	30-Sep-15*	30-Sep-15
Revegetation			
NB5C3E	Reveg - 100-N-96 (8.0 Acres)	19-Nov-15	23-Nov-15



Current Bar Labels % Complete
Project Baseline Milestone

Closure Operations

Attachment 5

TRI-PARTY AGREEMENT		
Change Notice Number TPA-CN- 657	**TPA CHANGE NOTICE FORM**	Date: 7/6/2015
Document Number, Title, and Revision: DOE/RL-96-84, Rev 0 and Rev 0-A, *Remedial Design Report and Remedial Action Work Plan for the 100-HR-3 and 100-KR-4 Groundwater Operable Units' Interim Action*		Date Document Last Issued: September 1996
Originator: Kris Ivarson		Phone: (509) 376-1941

Description of Change:

DOE/RL-96-84, is being updated to allow for single use, high capacity, ResinTech SIR-700 ion exchange resin as an approved alternate resin for use within the DX and HX groundwater pump-and-treat systems.

M.W. Cline (DOE) and N. Menard/ C. Guzzetti (Lead Regulatory Agency) agree that the proposed change modifies an approved sampling and analysis plan and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Text within DOE/RL-96-84 is updated to include SIR-700 ion exchange resin, as an alternate resin, at the pump-and-treat systems for the 100-HR-3 groundwater OU pump-and-treat systems, DX and HX.

Note: Added text is denoted by double underline. Deleted text is denoted by ~~strike-through.~~ Page 3-16 affected by the change is attached.

Justification and Impacts of Change:

The use of SIR-700 has been shown through testing and facility operation to be advantageous compared to Dowex 21 K. Significant cost savings will be realized due to less resin used, fewer resin changes, and potential elimination of the requirement for off-site shipment and regeneration.

Approval of the use of SIR-700 was previously given for the *Supplement to the 100-HR-3 and 100-KR-4 Remedial Design Report and Remedial Action Workplan for the Expansion of the 100-KR-4 Pump and Treat System* (DOE/RL-2006-75) through TPA-CN-505 specific to the KR-4 pump and treat system.

Approval of this change notice documents Washington State Department of Ecology and U.S. Environmental Protection Agencies approval of the use of SIR-700 resin at the 100-HR-3 OU pump and treat systems, DX and HX.

Approvals:

DOE Project Manager	7/7/2015 Date	[X] Approved [ ] Disapproved
EPA Project Manager	7/20/15 Date	[X] Approved [ ] Disapproved
Ecology Project Manager	7/16/15 Date	[X] Approved [ ] Disapproved

and testing of spent resin prior to disposal is presented in Chapter 5.0 of this document and will be presented in an Operations Waste Management Plan.

3.4.4.1 Ion-Exchange Modules. The interconnecting piping will be configured to allow series flow through three or four vessels with any of the vessels as the first (or lead) vessel. Design service flow rate through each module will be 380 L/min (100 gal/min) with service flow direction downward through each vessel. At design service flow rate, pressure drop across four vessels in series will not exceed 276 kPa (40 lb/in^2) with water at 1.7 to 26.7°C (35 to 80° F). Valves for aligning the vessels in different operating configurations will be manually operated. Each vessel will be equipped with a relief valve discharging to a common return header. Each module outlet pipe will be equipped with a manually operated valve for flow balancing.

3.4.4.2 Resin Loading System. The resin loading/removal system has been designed to allow the treatment system to continue operating during routine changeout procedures. The resin loading system will use treated water (from tank T-H02) to sluice (slurry) fresh resin into any vessel using a common transport header. Excess sluice water will be simultaneously removed from each vessel and returned to the process system (to tank T-H01). The resin loading system has been designed to minimize labor in emptying/sluicing fresh resin supplied in 0.14-m^3 (5-ft^3) fiber containers. Compressed air will not be used for any phase of resin loading.

3.4.4.3 Resin Removal and Dewatering System. Treated water (from tank T-H02) will be used to sluice exhausted resin from any vessel to a dewatering device using a common transport header. The dewatering device will have a porous surface to retain exhausted resin and fines. Water removal will be by gravity drainage. Resin removal from the dewatering device will be performed by the operators. Drained water from the dewatering device will be returned to the process system (to tank T-H01). Components of the resin removal/dewatering system will be protected from unsafe operating conditions (overflowing, running dry, etc.) by automatic protective features. The use of a PLC to control system functions will be considered. Compressed air will not be used for any phase of resin removal or dewatering.

3.4.4.4 Backwash System. Treated water (from tank T-H02) will be used to backwash (expand by 50%) any ion-exchange vessel resin bed. Backwash water from any ion-exchange vessel will return to tank T-H01 via a common header equipped with a screened trap. The backwash system may be an integral part of the systems described in Sections 3.4.4.2 and 3.4.4.3. Compressed air will not be used in any phase of resin backwash.

3.4.4.5 Resin Type. The type of resin used in each of the groundwater treatment systems will be periodically evaluated for performance and cost effectiveness. During the course of the interim action, changing groundwater characteristics, resin availability and cost, or development of new resins may justify a change in the resin used. Prior to changing the resin type, supporting information will be provided to the regulatory agencies to demonstrate the basis for the change. Based on the successful resin testing and operations conducted at 100-KR-4 groundwater OU, ResinTech SIR-700™ is approved for use at 100-HR-3 groundwater OU, which includes the DX and HX pump-and-treat systems.

Attachment 6

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 674	**TPA CHANGE NOTICE FORM**	Date: 7/7/2015
Document Number, Title, and Revision: DOE/RL-2006-75, Reissue, Rev 1, *Supplement to the 100-HR-3 and 100-KR-4 Remedial Design Report and Remedial Action Workplan for the Expansion of the 100-KR-4 Pump and Treat System*		Date Document Last Issued: September 2008
Originator: Kris Ivarson		Phone: (509) 376-1941

Description of Change:

Provide clarification to allow for the use of SIR-700 at KW and KX pump-and-treat systems.

M.W. Cline (DOE) and C.J. Guzzetti (Lead Regulatory Agency) agree that the proposed change modifies an approved sampling and analysis plan and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Text within DOE/RL-2006-75 is updated to include SIR-700 ion exchange resin, as an alternate resin, at the KW and KX pump-and-treat systems in addition to the KR-4 pump-and-treat system.

Note: Added text is denoted by double underline. Deleted text is denoted by ~~strike-through.~~ Page 3-8, attached, is affected by this change.

Justification and Impacts of Change:

Approval of the use of SIR-700 was previously given for the *Supplement to the 100-HR-3 and 100-KR-4 Remedial Design Report and Remedial Action Workplan for the Expansion of the 100-KR-4 Pump and Treat System* (DOE/RL-2006-75) through TPA-CN-505 specific to the KR-4 pump and treat system. This change clarifies that the use of SIR-700 is approved for KX and KW also.

Approval of this change notice documents Washington State Department of Ecology and U.S. Environmental Protection Agencies approval of the use of SIR-700 resin at any of the 100-KR-4 groundwater OU pump and treat systems.

Approvals:

DOE Project Manager	7/7/2015 Date	[X] Approved [ ] Disapproved
EPA Project Manager	7/20/15 Date	[X] Approved [ ] Disapproved
N/A Ecology Project Manager	Date	[ ] Approved [ ] Disapproved

199-K-143 and 199-K-150. Well 199-K-143 is a monitoring well that has been converted to an injection well; it is located inland of the downstream end of the former 116-K-2 Trench.

Injection wells 199-K-169 and 199-K-170, will be located north of the existing 100-KR-4 injection well field and completed by the end of FY08. Wells 199-K-171 and 199-K-172 will be located east of the existing 100-KR-4 injection well field.

The wells will be fully penetrating to the top of the Ringold Upper Mud Unit with 15.2-cm (6-in.)-diameter, stainless-steel casing and 0.020-in. (20-slot) screens. The well screens will extend at least 6.1 m (20 ft) above the average static water level in the wells. Well design details are displayed in Table 3-1. The initial injection rates for each well were set to 189.3 L/min (50 gpm) for the analytical modeling but are subject to change based on actual aquifer and vadose zone properties.

3.3.3 Balance of Plant

The balance of plant will include all control systems, piping, valves, pumps, and electrical and mechanical equipment that enables groundwater from the extraction wells conveyed to the treatment system and returned to the injection wells and to the aquifer.

The 100-KR-4 expanded pump-and-treat system has been designed to run with minimal operator interface. This capability results from the use of programmable logic controllers (PLCs) that receive and transmit electronic signals to and from the field control devices. Data are also transmitted via optical cable to the primary human/machine interface (HMI) where they can be viewed by the operator and system adjustments can be performed if necessary.

The HMI will be located in the treatment building and represents the primary link between the operator and the pump-and-treat system. From the operator interface control (OIC), the operator can view all tank levels, pump status, flow rates, pumping water levels, and alarm status. The OIC also serves as a data storage and retrieval device and will be configured so the system status can be viewed via a laptop computer from offsite locations.

Piping and electrical lines to wells will be run overland to minimize any cultural resource impacts. Freeze-control design will be included as part of the treatment system. No freeze protection will be applied to overland piping.

3.3.4 Groundwater Treatment System

The groundwater treatment system is constructed with a treatment capacity of 2,271 L/min (600 gpm). This design capacity is based on experience gained from operation of the existing 100-KR-4 pump-and-treat system. The nominal system operational flow rates will depend on aquifer conditions and groundwater transfer subsystem capacity.

The treatment system operational and acceptance testing has been scheduled for the Fall of 2008 to implement the remedial action as quickly as possible.

The selected treatment process for use at KX, KW and KR-4 pump-and-treat systems will use an IX system with Dowex® 21K or ResinTech™ SIR-700 resin that has effectively removed hexavalent chromium at the 100-HR-3 and 100-KR-4 pump-and-treat systems. If an alternate resin or other treatment system is identified, it may be used if approved by EPA. Spent resin may be regenerated offsite or at the Effluent Treatment Facility, or otherwise managed in a manner approved by EPA for this remedial action.

Dowex® is a registered trademark of Dow Chemical Company, Midland, Michigan.

Attachment 7

^WCH Document Control

From: Saueressig, Daniel G
Sent: Tuesday, July 21, 2015 2:11 PM
To: ^WCH Document Control
Subject: FW: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

From: Boyd, Alicia (ECY) [mailto:aboy461@ecy.wa.gov]
Sent: Tuesday, July 21, 2015 10:11 AM
To: Guzzetti, Chris; Saueressig, Daniel G
Cc: Johnson, Brian (ECY)
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

I concur with sending the waste to 100-D.

Alicia L. Boyd
Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, WA 99352
509-372-7934

From: Guzzetti, Christopher [mailto:Guzzetti.Christopher@epa.gov]
Sent: Tuesday, July 21, 2015 9:57 AM
To: Saueressig, Daniel G; Boyd, Alicia (ECY)
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

I concur.

Christopher J. Guzzetti
Project Manager
Hanford Project Office
U.S. Environmental Protection Agency
825 Jadwin Avenue, Suite 210
Richland, WA 99352

Phone: (509) 376-9529
Fax: (509) 376-2396
Email: guzzetti.christopher@epa.gov

From: Saueressig, Daniel G [mailto:daniel.saueressig@wch-rcc.com]
Sent: Tuesday, July 21, 2015 7:16 AM
To: Guzzetti, Christopher; Boyd, Alicia
Subject: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Chris/Alicia, we have one more sampling event at 100-H (100-H-36 spillway/flume) and I need to request your approval to send the sampling waste (PPE, plastic scoops) to the ERDF can we have staged at 100-D.

Let me know if you concur.

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

From: Guzzetti, Christopher [mailto:Guzzetti.Christopher@epa.gov]
Sent: Tuesday, June 30, 2015 11:53 AM
To: Boyd, Alicia; Saueressig, Daniel G
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

I concur.

Christopher J. Guzzetti
Project Manager
Hanford Project Office
U.S. Environmental Protection Agency
825 Jadwin Avenue, Suite 210
Richland, WA 99352

Phone: (509) 376-9529
Fax: (509) 376-2396
Email: guzzetti.christopher@epa.gov

From: Boyd, Alicia (ECY) [mailto:aboy461@ecy.wa.gov]
Sent: Tuesday, June 30, 2015 7:45 AM
To: Saueressig, Daniel G; Guzzetti, Christopher
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Sounds good to me.
Alicia

From: Saueressig, Daniel G [mailto:daniel.saueressig@wch-rcc.com]
Sent: Tuesday, June 30, 2015 7:00 AM
To: Guzzetti, Christopher
Cc: Boyd, Alicia (ECY)
Subject: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Chris, we'll performing some closure sampling at 100-H-59:2 next week and we don't have a waste storage area set up at 100-H anymore. I'd like to request a non-contiguous onsite approval to place the sampling waste (PPE, plastic scoops, etc.) into an ERDF can we have staged at 100-D.

Let me know if you concur.

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

(7)

Attachment 8

^WCH Document Control

From: Saueressig, Daniel G
Sent: Tuesday, July 28, 2015 3:57 PM
To: ^WCH Document Control
Subject: FW: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Please provide a chron number. This email documents a regulatory approval.

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

From: Guzzetti, Christopher [mailto:Guzzetti.Christopher@epa.gov]
Sent: Tuesday, July 28, 2015 12:11 PM
To: Saueressig, Daniel G; Boyd, Alicia
Cc: 'brjo461@ecy.wa.gov'
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Dan,

Thanks for the clarification.

Christopher J. Guzzetti
Project Manager
Hanford Project Office
U.S. Environmental Protection Agency
825 Jadwin Avenue, Suite 210
Richland, WA 99352

Phone: (509) 376-9529
Fax: (509) 376-2396
Email: guzzetti.christopher@epa.gov

From: Saueressig, Daniel G [mailto:daniel.saueressig@wch-rcc.com]
Sent: Tuesday, July 28, 2015 11:54 AM
To: Guzzetti, Christopher; Boyd, Alicia
Cc: 'brjo461@ecy.wa.gov'
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Thanks Chris, the intent of this is only to manage nuisance spills (small volumes) of non-regulated fluids like engine oil or hydraulic fluid during the remaining backfill campaign at 100-H scheduled to be complete in October (and potentially during revegetation this winter). Larger spills, which are thankfully very infrequent, would most likely be loaded directly into a material handling vehicle (MHV or dump truck) and hauled directly to ERDF. Also if something regulated spilled (unleaded gasoline), I believe we'd request a container storage area from Alicia as this waste could potentially need to go offsite for treatment.

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

From: Guzzetti, Christopher [mailto:Guzzetti.Christopher@epa.gov]
Sent: Tuesday, July 28, 2015 9:56 AM
To: Saueressig, Daniel G; Boyd, Alicia
Cc: 'brjo461@ecy.wa.gov'
Subject: RE: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

I concur with the request.

Christopher J. Guzzetti
Project Manager
Hanford Project Office
U.S. Environmental Protection Agency
825 Jadwin Avenue, Suite 210
Richland, WA 99352

Phone: (509) 376-9529
Fax: (509) 376-2396
Email: guzzetti.christopher@epa.gov

From: Saueressig, Daniel G [mailto:daniel.saueressig@wch-rcc.com]
Sent: Monday, July 27, 2015 12:35 PM
To: Guzzetti, Christopher; Boyd, Alicia
Cc: 'brjo461@ecy.wa.gov'
Subject: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

Chris/Alicia, we had a small (1 quart) hydraulic leak from a D9 dozer at the 100-H laydown yard. I'd like to request your approval to place the spill cleanup material in the ERDF can staged at 100-D. Also, I'd like to request blanket approval to move spill cleanup material from 100-H to 100-D as 100-H is the last area we will be utilizing heavy equipment (except for revegetation activities).

Let me know if you concur.

Thanks,

Dan Saueressig
Environmental Project Lead
Washington Closure Hanford
521-5326

Attachment 9

300 Area Closure Project Status
August 13, 2015

- UMM Status –

Backfill
- Backfill completed for RLWS, RRLWS, 300-214, 300-15, and 316-3 excavations.
- Backfill completed for the 309 excavation.

324 Building
- 100% design completed for retrieval.
- Continue S&M (min-safe operations) through FY 16.
- Replacement of Zone 1 HEPA filters pending.

300-277
- Remediation complete, verification samples taken.
- Backfill complete, revegetation pending.

300-288:2
- Remediation of Phase I initiated, currently scheduled to complete in March of 16.
- Characterization report for Phase II, nearly complete.

Final Revegetation
- Currently scheduled to commence late August, early September.
- Starts for UPR-600-22 winter of 15/16.

Site Completion
- Demobilization underway security fence repair completed.

WSRFs/CVPs
- All remaining 300 Area sites being processed in support of M-16-69.

(a)

Attachment 10

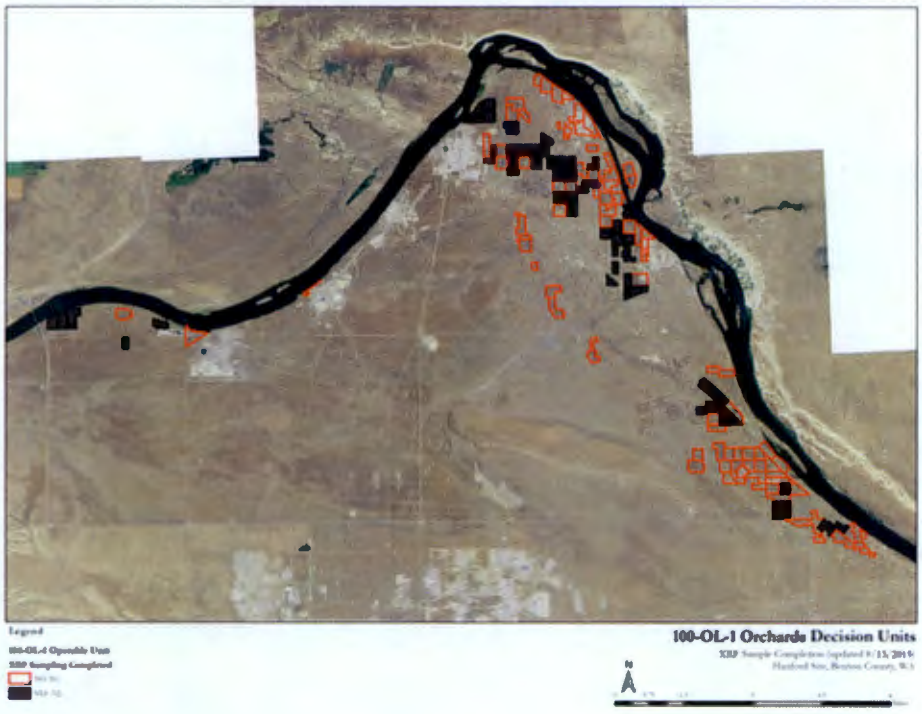
Hadley, Karl A

From: Sands, John P <john.sands@rl.doe.gov>
Sent: Thursday, August 13, 2015 12:42 PM
To: Hadley, Karl A
Cc: Hanses, Laura L
Subject: FW: Orchard Lands UMM Summary

I should have sent this to you.

From: Sands, John P
Sent: Thursday, August 13, 2015 12:35 PM
To: Hanses, Laura L
Subject: Orchard Lands UMM Summary

As of this week we have completed characterization in 52 of the 133 Decision Unit (39%), 1951 acres out of 4995 acres in the Operable Unit (39%). Below is a map of the areas that have been characterized (in black) and the decision units that remain to be characterized.



We got bogged down in the weeds in DU-70 one day this week (see image below), so we did not get to the third area that day. The results under all the vegetation were around background concentrations. DU-70 is northeast of the White Bluffs boat launch. We will pick up DU-132 in the next couple of weeks.

Next week, we will be characterizing DU-5, 9, 26, 27, 40, 46, 57, 58, 113, and 133. You can see these decision units on PHOENIX (http://phoenix.pnnl.gov/). Select either "PHOENIX Classic: Groundwater" or "GIS Explorer" app. Then click on the layer called, "Orchards (PNNL with labels)". The decision unit names are more obvious as you zoom into an area.

On Wednesday, August 9, we will be characterizing DU-5 and -9 via boat. We are sending emails to CHPRC today to remind them that we will be in on the 100-K shoreline for characterizing DU-9. For all our work with boats on the Hanford Reach, we file a boat plan with Hanford Patrol, PNSO, PNNL security, and next week I will also copy CHPRC.

From: Hanses, Laura L
Sent: Thursday, August 13, 2015 6:33 AM
To: Ayres, Jeff; Balone, Steven N; Barrett, William F; Baynes, Patrick A; Benjamin Simes; Bond, Rick; Boothe, Gabrille; Borghese, Jane V; Boyd, Alicia; Brunke, Ronald C; Buckmaster, Mark A; Callison, Stacey W; Capron, Jason M; Carlson, Richard A; Cearlock, Christopher S; Clark, Clifford E (Cliff); Clark, Steven W; Cline, Michael; Crumpler, Joe; Cusack, Laura J; Dagan, Ellen B; Danielson, Al; Dixon, Brian J; Doornbos, Martin H; Einan; Elliott, Wanda; Faught, William R; Ford, Bruce H; French, Mark S; Fruchter, Jonathan S; Glossbrenner, Ellwood T; Goswami, Dibakar; Guercia, Rudolph F (Rudy); guzzetti.christopher@epamail.epa.gov; Hadley, Karl A; Hansen, James A; Hanson, James P; Hartman, Mary J; Howell, Theresa Q; Jaraysi, Moses; Kapell, Arthur; KIWE461@ECY.WA.GOV; Koegler, Kim J; LaRue, Deena N; Laura; Lawrence, Barry L; Lerch, Jeffrey A; Lobos; Louie, Catherine S; Menard, Nina; Morse, John G; Neath, John P; Parnell, Scott E; Proctor, Megan L; Quintero, Roger A; Rochette, Beth; Sands, John P; Saueressig, Daniel G; Shelley Cimon; Sinton, Gregory L; Smith, Douglas C (Chris); Smith-Jackson, Noel; Strand, Christopher P; Strom, Dean N; Swartz, Mike; Teynor, Thomas K; Thomson, Jill E; Toews, Michelle R; Triner, Glen C; Turlington, Daniel R; Vannah, Benjamin W; Vedder, Barry L; Zeisloft, Jamie
Subject: Groundwater UMM Summary

Hello,

Attached is the Groundwater summary report for today's 100/300 Area Unit Manager meeting.

Thank you,

Laura Hanses
RS&I Secretary
(509) 372-8063

Laura_L_Hanses@rl.gov